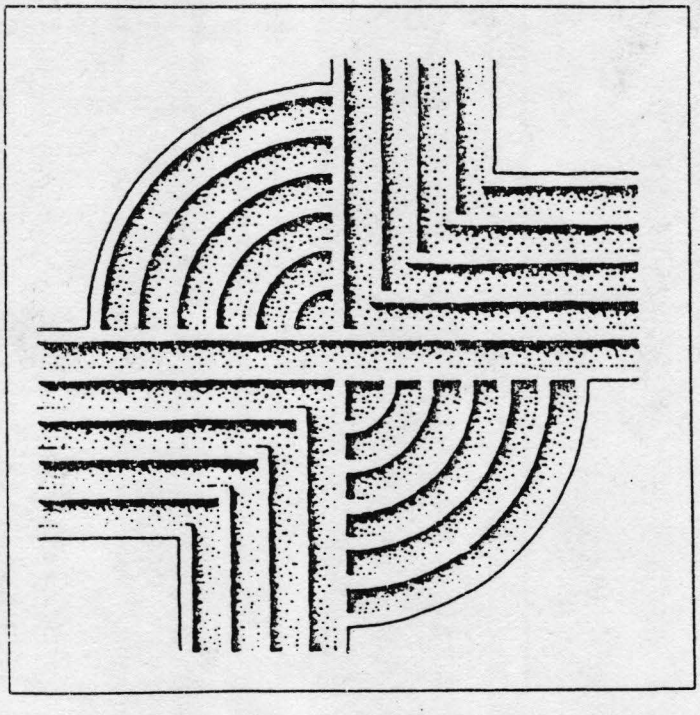
Rachel's Copy

FORT STEWART 2 AND 3: AN ARCHAEOLOGICAL SURVEY OF THE 809 HA SURVEY TRACT "A" (PORTIONS OF TRAINING AREAS E-16 AND E-20) AND THE 804 HA SURVEY TRACT "B" (PORTIONS OF TRAINING AREAS E-14 AND E-15), BRIGADE MANEUVER AREA, FORT STEWART,LONG AND TATTNALL COUNTIES, GEORGIA



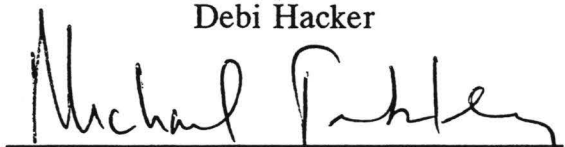
CHICORA FOUNDATION RESEARCH SERIES 208

FORT STEWART 2 AND 3: AN ARCHAEOLOGICAL SURVEY OF THE 809 HA SURVEY TRACT "A" (PORTIONS OF TRAINING AREAS E-16 AND E-20) AND THE 804 HA SURVEY TRACT "B" (PORTIONS OF TRAINING AREAS E-14 AND E-15), BRIGADE MANEUVER AREA, FORT STEWART, LONG AND TATTNALL COUNTIES, GEORGIA

Prepared For:
National Park Service
Southeast Region
75 Spring Street, S.W.
Atlanta, Georgia 30303
Funded by the United States Army

Under:
Contract Number 1443CX500095043
Purchase Order Number 1443PX502096129
and
Purchase Order Number 1443PX502096130

Prepared By:
Michael Trinkley
William B. Barr
and
Debi Hacker



Michael Trinkley, Ph.D.

CHICORA RESEARCH CONTRIBUTION 208

Chicora Foundation, Inc.
P.O. Box 8664 ▪ 861 Arbutus Drive
Columbia, South Carolina 29202-8864
Email: chicora1@aol.com

February 30, 1997

This report is printed on permanent paper ∞.

ABSTRACT

This study represents an intensive archaeological survey of two areas, designated "A" and "B," in the Brigade Maneuver Area of Fort Stewart, Georgia. Survey tract "A", located in Long and Tattnall counties, Georgia, contains approximately 809 ha and includes portions of Training Areas E-16 and E-20. Survey tract "B", located entirely in Long County, contains approximately 804 ha and includes portions of Training Areas E-14 and E-15.

This work is being done in order to comply with the National Historic Preservation Act (Public Law 89-665, as amended by Public Law 96-515), Guidelines for Federal Agency Responsibilities, under Section 110 of the National Historic Preservation Act, Army Regulation AR 420-40, and 36CFR800 (Protection of Historic and Cultural Properties). The project is administered for the United States Army by the National Park Service (NPS), Southeast Regional Office. The scope of work specified that the entire project area be surveyed as high probability using transects and shovel tests spaced at 30 m intervals.

The primary purpose of this investigation is to identify and assess the archaeological remains present at Fort Stewart for the National Register of Historic Places. There were also a number of secondary goals which included:

- determining the need for deep shovel testing to locate and assess prehistoric sites;
- exploring the effectiveness of the current Fort Stewart predictive model and examining prehistoric and historic patterns of land use, location, and site intensity;
- exploring site function/duration based on artifact content; and
- better understanding the regional culture history.

These investigations incorporated a review of previously reported site files located at the office of the base archaeologist. Six previously recorded archaeological sites (9LG6, 9LG9, 9LG10, 9LG23, 9LG28, and 9LG33), were within the survey boundaries of tract "A". One previously recorded site (9LG47) was within the survey boundaries of tract "B". In addition, the base's Historic Preservation Plan was consulted regarding sites or structures on the National Register of Historic Places within the two survey areas. Although none of the previously located sites within the two areas were recorded as being eligible, five had their eligibility listed as unknown.

Twenty-one archaeological sites and 22 isolated occurrences (which are also assigned site numbers) were identified during the survey. Seventeen of these sites and 14 isolated occurrences were found in survey tract "A". Four additional sites and eight isolated occurrences are recorded in survey tract "B".

Two these sites, 9LG121 and 9LG130, are recommended potentially eligible for inclusion on the National Register of Historic Places.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

Survey Background

Investigations of the 809 ha survey tract "A" and the 804 ha survey tract "B" areas of Fort Stewart, Georgia were conducted by Mr. William B. Barr of Chicora Foundation, Inc. for the National Park Service. Fort Stewart is located in southeastern Georgia and encompasses portions of Liberty, Long, Tattnall, Evans, and Bryan counties (Figure 1). Survey tract "A" is located in Long and Tattnall counties, whereas survey tract "B" is located entirely within Long County (Figure 2).

Two major highways run through the base. Georgia State Highway 144 travels east-west and Georgia State Highway 119 travels north-south. Intersecting these main roads at various locations within the base are a network of primary and secondary clay or sand roads. These were found in both survey tracts. The clay based, primary roads provide access to a number of secondary perimeter and firebreak roads, as well as random two-rut vehicle tracts. Many of these roads were constructed utilizing fill from numerous borrow pits located on base. A number of these roads, such as Georgia Sate Highway 144, follow eighteenth and nineteenth century roadbeds. All of these roads assisted in accessing different portions of the survey areas.

Within survey tract "A" the major north-south road is Fort Stewart Road 5. Fort Stewart Road 6 constitutes the northwestern boundary of the survey area whereas a single vehicle width, two-rut firebreak road defines the northeastern boundary. Fort Stewart Road 9, which runs north-south, forms the eastern border and Fort Stewart Road 9B forms the southern boundary. Fort Stewart Road 5 forms a portion of the western boundary. The portion of survey tract "A" which lies west of Fort Stewart Road 5 is bounded to the north by a single vehicle width, two-rut firebreak road, to the south by both a single vehicle width, two-rut firebreak road and Fort Stewart Road 4, and to the west by the reservation boundary as well as portions of Slades Branch (Figure 3).

Survey tract "B" lies due south of survey tract "A" and is contiguous. The northern boundary is formed by Fort Stewart Road 9B. The eastern boundary is formed by a portion of Fort Stewart Road 9 and Fort Stewart Road 33. The southern boundary is formed by an abandoned railroad bed and the western boundary is formed by the north-south section of Fort Stewart Road 33B as well as a single vehicle, two-rut firebreak road north of Fort Stewart Road 4 (Figure 4).

Both survey tracts are heavily wooded with a mix of pine and hardwood. Cleared areas within their boundaries are generally the result of burning operations conducted by Fort Stewart personnel. Sparse grass can be found throughout a majority of these areas while those areas near the drainages and marshlands tend to have thicker vegetation.

The entire study area was examined using transects spaced at 30 m intervals. Shovel tests were placed at 30 m intervals along these transects. Once an archaeological site was identified, the area was shovel tested on a north-south cardinal grid pattern at 10 m to 20 m intervals. The size of site testing intervals was determined by site size. In addition, at least one 50 cm square test unit was excavated at each recorded site.

Measurements, in compliance with the National Park Service scope of work, were taken using metric units. In order to maintain consistency throughout this research, all measurements are provided using metric units and Table 1 provides conversions to English measures. The only exception is that of contours on site maps. These measurements, taken from United States Geological Survey maps, are in feet.

These investigations incorporated a review of sites located within the survey areas by Fort

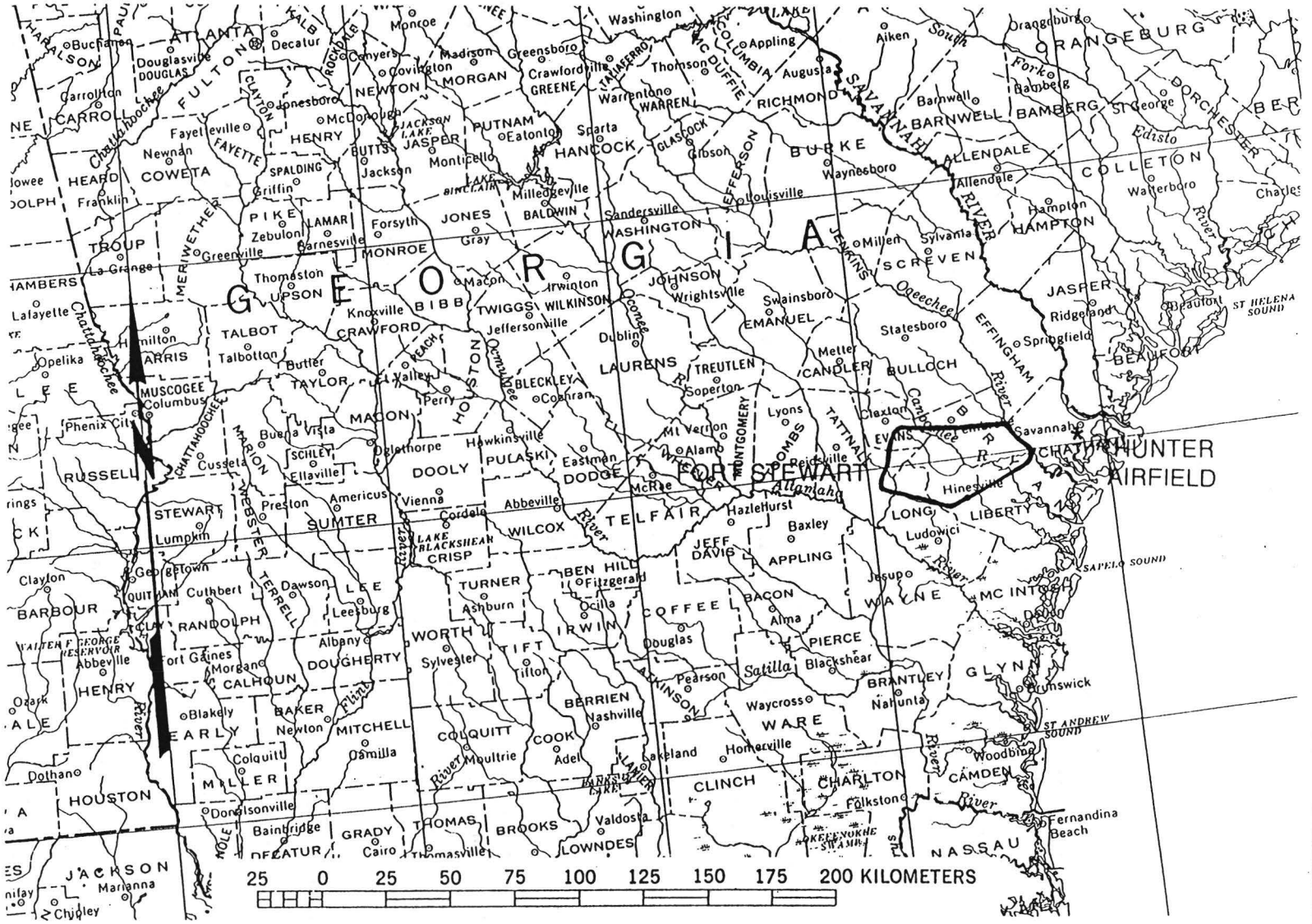


Figure 1. Location of Fort Stewart and Hunter Army Airfield in Coastal Georgia (base map is USGS United States, 1972, 1:2,500,000).

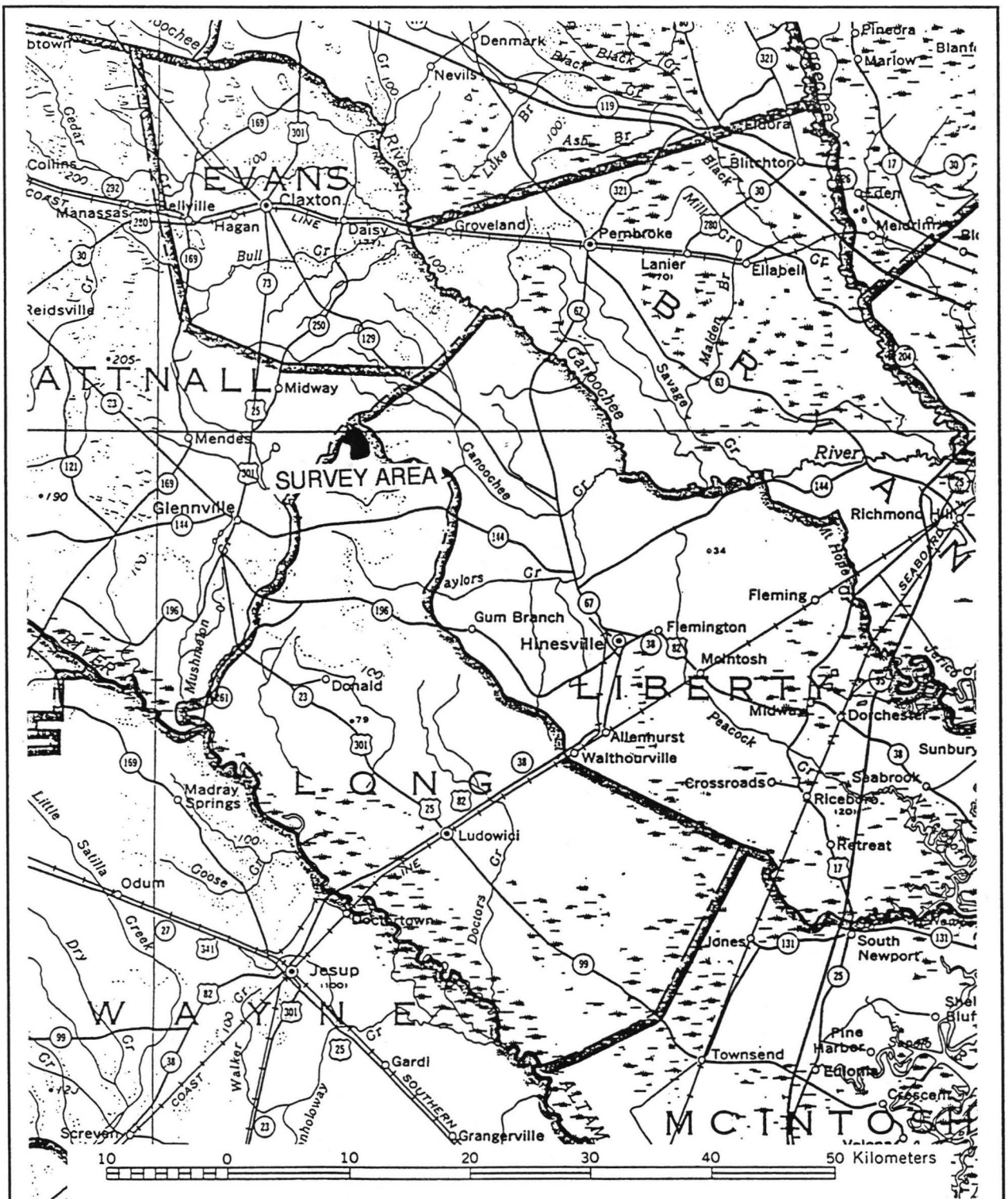


Figure 2. Location of survey tract "A" in Long and Tattnall counties and survey tract "B" in Long County, Georgia (base map is USGS, State of Georgia, 1977, 1:500,000).

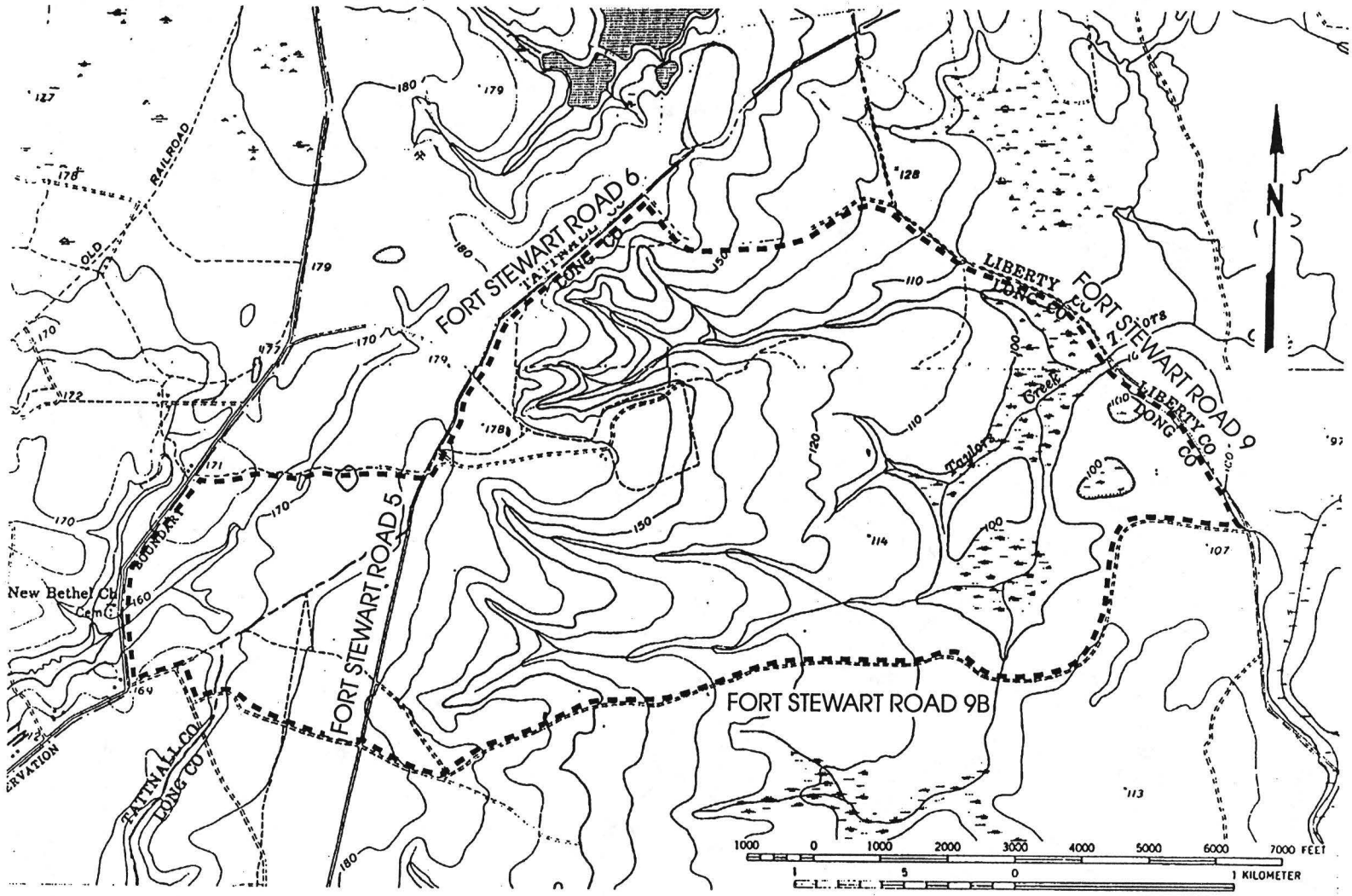


Figure 3. Survey tract "A", showing boundaries and major roadways (base map is USGS Glennville, 1958PR76 and Glissons Millpond 1958PR73, 1:24,000).

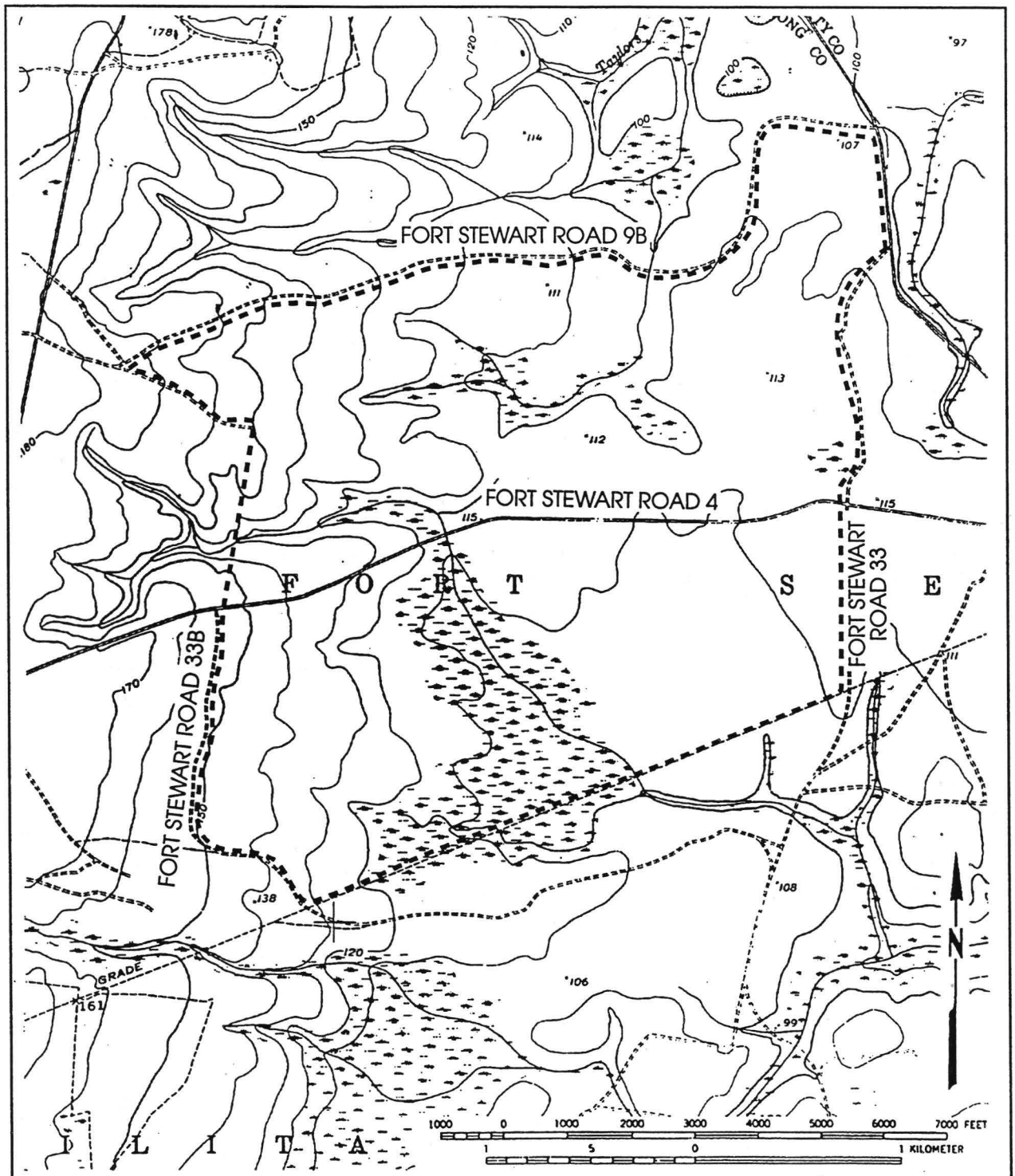


Figure 4. Survey tract "B", showing boundaries and major roadways (base map is USGS Glennville, 1958PR76, 1:24,000).

Table 1.
Metric Equivalents

LENGTH		
kilometer	km	0.62 miles
meter	m	39.37 inches or 3.28 feet
centimeter	cm	0.39 inches
millimeter	mm	0.04 inches
AREA		
hectare	ha	2.47 acres
square km	km^2	0.3861 square miles
WEIGHT		
metric ton	t	1.1 English tons
TEMPERATURE		
C to F = (°C x 1.8) + 32 = °F		

Stewart's Consulting Archaeologist David McKivergan, Professional Analysts, Inc., Carolina Archaeological Services, and Chicora Foundation, Inc. are on file with the Georgia State Archaeological Site Files, located in Athens, Georgia. In survey tract "A" a total of three historic archaeological sites were previously recorded by McKivergan, one prehistoric and one historic archaeological site were recorded by Carolina Archaeological Services, and one prehistoric archaeological site was recorded by Professional Analysts, Inc. In survey tract "B" only one historic archaeological site was previously recorded by Chicora Foundation, Inc. In addition, Fort Stewart's Historic Preservation Plan (Campbell et al. 1996) was consulted concerning sites or structures on the National Register of Historic Places within each specific area. Other than those recorded by the base's Consulting Archaeologist David McKivergan, Professional Analysts, Inc., Carolina Archaeological Services, and Chicora Foundation, Inc., none were found. Historic and ethnographic background research was conducted at the Hinesville and Savannah public libraries, the Georgia Historical Society in Savannah, the Atlanta History Center, the Georgia Department of Archives and History, and the Savannah District office of the United States Corps of Engineers. Published reports regarding previous surveys conducted were also consulted.

Prehistoric and historic sites were located in both survey areas. A total of 17 sites were identified within survey tract "A" (9LG23, 9LG28, 9LG94, 9LG97, 9LG99 - 9LG103, 9LG105, 9LG106, 9LG110, 9LG112, 9LG114, 9LG117, 9TT142, 9TT143) along with 14 isolated occurrences (defined as fewer than five artifacts in a 20 m diameter area) — 9LG6, 9LG9, 9LG95, 9LG96, 9LG98, 9LG104, 9LG107 - 9LG109, 9LG111, 9LG113, 9LG116, 9LG118, 9LG119. In survey tract "B" a total of four sites were identified (9LG47, 9LG120, 9LG121, 9LG130) along with nine isolated occurrences — 9LG122 - 9LG129.

Of the archaeological sites identified, only two, 9LG121 and 9LG130, are recommended as potentially eligible for inclusion on the National Register of Historic Places. Site 9LG130 is situated outside the project area and could not be fully assessed. The uncertainty of its potential would suggest that it be considered potentially eligible for inclusion on the National Register of Historic Places. The remainder of the sites and isolated occurrences are recommended as not eligible.

Prehistoric sites included 9LG100, 9LG105, and 9TT142 in survey tract "A". No prehistoric sites we located in survey tract "B". Historic site locations included 9LG23, 9LG28, 9LG94, 9LG97, 9LG99 - 9LG103, 9LG47, 9LG106, 9LG110, 9LG112, 9LG114, 9LG117, 9TT142, and 9TT143 in survey tract "A" and, and 9LG47, 9LG120, and 9LG121 in survey tract "B", as well as 9LG130 located just outside the project boundaries. The historic community of Shady Grove is located in the northern portion of survey tract "A". This community includes a number of inter-related dispersed farmstead house site locations within an tightly clustered area. The lack of historic information concerning the community and material remains precluded assigning this area one site number. All of the historic sites contained artifacts dating from the mid-nineteenth to the early twentieth centuries. The recovered prehistoric sites primarily contain undiagnostic lithic artifacts. Only one site (9LG105), from

contained diagnostic prehistoric pottery which temporally dates the site to the Mississippian period.

Surveys were conducted from October 1, 1996 to January 31, 1997, and the Principal Investigator for the project was Dr. Michael Trinkley. Co-Field Directors for the project were Mr. William Barr and Mr. Scott G. Sutton. Field crew consisted of Ms. Sabrina C. Buck, Mr. D. Gregg Dickey, Ms. Sharon E. Dooley, Mr. John D. Hamer, Mr. Hollis P. Lawrence, Mr. Jeffery B. Mattox, Mr. Douglas C. McKay, Ms. Kimberly A. Morrell, Mr. Jim C. Ricker, Ms. Michelle B. Smith, and Mr. Matthew Weaver.

Curation

Archaeological site forms have been filed with the Georgia Office of State Archaeology. The field notes, photographic materials, artifact catalogs, and artifacts resulting from these investigations have been curated at Fort Stewart using their accessioning and cataloging system. All records and duplicate copies have been provided to Fort Stewart and will be maintained by that institution in perpetuity.

NATURAL SETTING

Physiography and Drainage

Fort Stewart, which encompasses about 103,550 ha, forms a roughly rectangular shape measuring about 32 km north-south by about 56 km east-west. The fort's most distinctive feature is perhaps its lack of relief. Elevations range from about 50 m in the west to about 3 m in the east.

Located entirely within the Coastal Plain Province on the southeastern Atlantic coast of Georgia, this area is often referred to as the Atlantic Coast Flatwoods (Looper 1982:66). The coastal `lain is best known for its featureless plains and marshes in the east. The flatwoods are characterized by their nearly level topography and poorly drained soils. The mostly sandy loam to sandy topsoils are underlain by marine sand, loams, or clays. The soils generally have high water tables and are often found to be unsuitable for a broad range of residential and industrial activities (Hodler and Schretter 1986:36). The area is also characterized by inlets and creeks draining an extensive system of drowned river systems and shallow marsh-filled coastal lagoons. The topography consists of subtle undulations in the landscape revealing the ridge and bay topography of the beach ridge plains (Mathews et al. 1980:137).

Fort Stewart is largely confined to what is often called the Barrier Island District — an area of slight to moderate dissection created by the advance and retreat of former sea levels. There are, as a result, six shoreline deposit complexes found parallel to the coastline in a step-like progression of decreasing elevations. This dissection has also resulted in marshes that exist in poorly drained lowlands. To the northwest are the Vidalia Uplands, a moderately dissected upland with a well developed dendritic stream pattern based on gravelly, clayey sands. The floodplains are typically narrow, except along the major rivers where wider, bordering swamps are often found (Hodler and Schretter 1986:17).

A number of relatively small streams and creeks, which are part of the Ogeechee River drainage system, make up Fort Stewart's drainage pattern. The Canoochee River is the main drainage for the base and flows west to east through the center of the reservation. A number of smaller tributaries such as Canoochee, Taylors, and Savage creeks flow into the Canoochee. The eastern boundary of Fort Stewart is defined by the Ogeechee River (Figure 5).

The two survey areas are situated in the southwest quadrant of the base. The Canoochee Creek, running east-west, is situated north of the study tracts, while Taylors Creek, also running east-west, is the primary drainage for both tracts (Figure 5).

The 809 ha survey tract "A" is located in Long and Tattnall counties. The 804 ha survey tract "B" is located entirely in Long County, Georgia. Long County is bounded to the north by Tattnall County, to the east by Liberty County, to the south by McIntosh County, and to the west by Wayne County. Tattnall County is bounded to the north by Chandler County, to the northeast by Evans County, to the southeast by Liberty and Long counties, to the south by Appling and Wayne counties, and to the west by Toombs County.

Modifications to the physical landscape in both survey areas are minimal. In this portion of the base, landscape changes have been in the form of floods which deposited alluvial soils and the introduction of pre-World War II farm machinery. Only along the interior base roads is there major landscape modification. This is quite severe in some areas and less severe in others. Quite often these areas have been heavily impacted by heavy machinery and military vehicles (Figure 6 and 7). The remainder of both survey tracts have been impacted by farming as well as other modifications

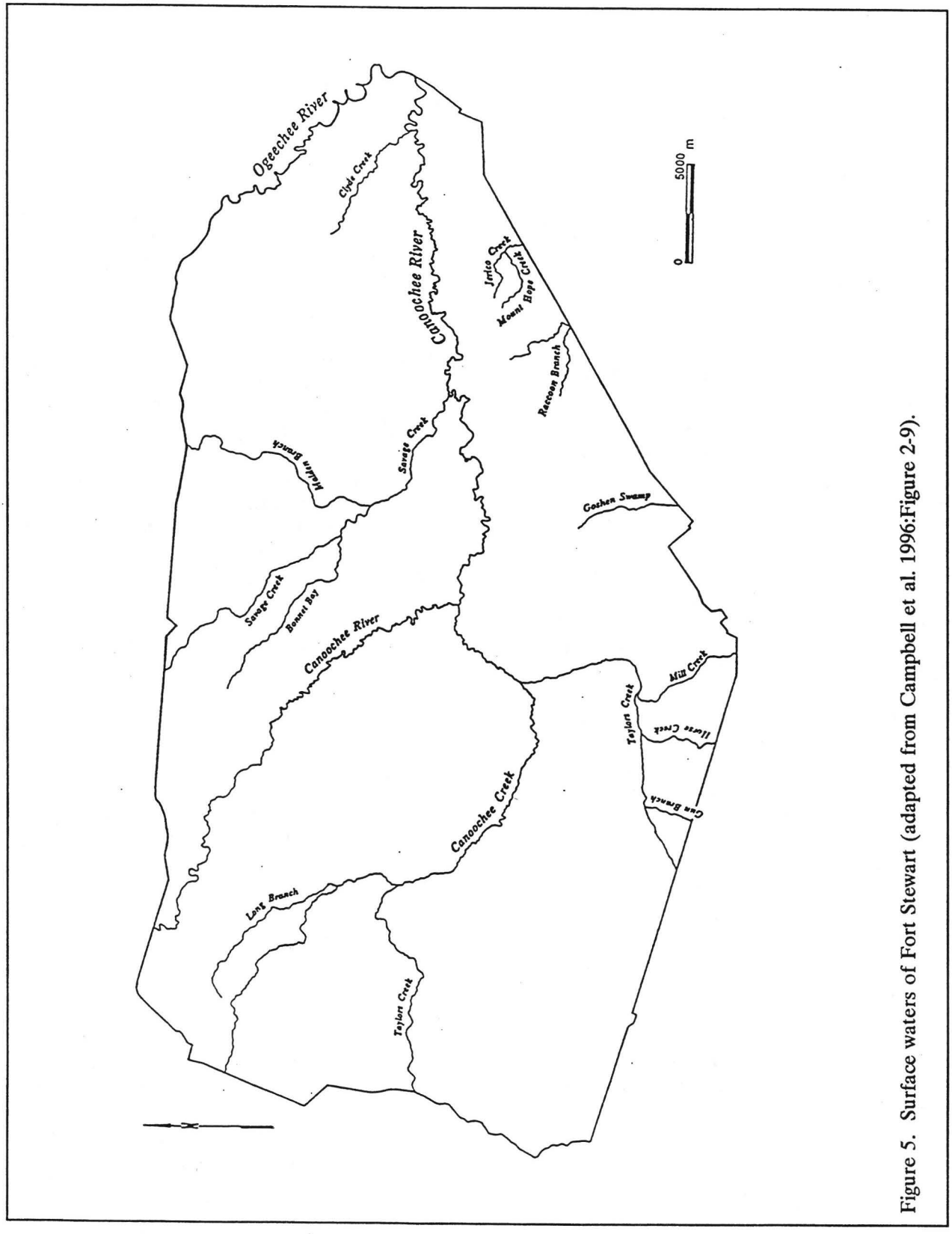


Figure 5. Surface waters of Fort Stewart (adapted from Campbell et al. 1996:Figure 2-9).

Figure 6. Road grading equipment parked at intersection of Fort Stewart Roads 9 and 9B, view to the northwest.

Figure 7. Physical impacts from military vehicles at the intersection of Fort Stewart Roads 9 and 33, view to the west.

related to military operations such as borrow pits and pond construction. It is possible that some sites, which today are found far from flowing water, may have had springs or minor creeks which flowed much closer to the site. A good example is a series of three prehistoric isolated occurrences recovered from survey tract "B" during the 1996-1997 survey. Although these sites (9LG122 - 9LG124) only contain undiagnostic lithics, all were located along a slight terrace overlooking a drainage rim. Today, this area is a seasonal swamp extending far beyond the area shown on the USGS topographic map of the area.

Geology and Soils

The surface geology of Fort Stewart and the Hunter Army Airfield is dominated by sediments of Quaternary age (Hodler and Schretter 1986:12-13). Sand, silts, and clays originally derived from the Appalachian Mountains and the interior Piedmont are organized into coastal fluvial and aeolian deposits which virtually blanket the Coast. These sediments were transported seaward and deposited during the Quaternary period. Underlying the surface sediments are bedrock sedimentary strata of Tertiary and Mesozoic age which are almost uniformly eroded and variously lithified (Mathews et al. 1980:2). The Mesozoic and Tertiary sedimentary rocks are infrequently exposed, usually in river banks and bottoms, in deep tidal channels, and in man-made quarries.

Of perhaps greatest significance in this discussion of coastal geology is an overview of chert resource. While agate, chalcedony, and jasper were also used by prehistoric groups, these materials occur in Georgia in very small amounts (Ledbetter et al. 1991:1-2), especially when compared to chert (Goad 1979:2). Chert, on the other hand, while occurring discontinuously, is present throughout the Coastal Plain, primarily associated with Paleozoic and Tertiary Period limestones. Georgia chert may range from black or brown through white, yellow, gray, and cream, depending on the various chemical impurities. Some will be fossiliferous.

While the Piedmont contributes a broad range of volcanic and metavolcanic materials important to prehistoric occupants, and may even contribute small quantities of jasper-like and agate material (Goad 1979:5), chert is found primarily in the Ridge and Valley Province in the extreme northwestern corner of the state and the Coastal Plain. Ledbetter and his colleagues note that chert-like materials may also occur "spottily" in the 20 km wide "hinge zone" between the Towaliga-Hartwell Fault and the Middleton Lowndesville Fault in the Inner Piedmont of Georgia (Ledbetter et al. 1981:6).

Goad reports that the major occurrences of chert in Georgia Coastal Plain are found associated with Tertiary Period formations, primarily from Eocene and Oligocene Epoch deposits (although other sources were sporadically used). She observes that, "the major occurrences of Coastal Plain chert are in southwestern Georgia, west of the Flint River, along the Fall Line, and in southeast Georgia along the Savannah River below Augusta" (Goad 1979:19). It may be found as residual nodules and boulders, scattered along streams and ridges, or as cropping beds. She also notes that while the different strata have recognizable chert forms, the range in variation is much greater in the Coastal Plain than in the Ridge and Valley area. This makes the identification of specific point sources more difficult and less reliable (Goad 1979:24).

Sources have been identified from Baker, Bibb, Burke, Calhoun, Crisp, Decatur, Dooly, Dougherty, Early, Grady, Houston, Jefferson, Laurens, Lee, Macon, Miller, Mitchell, Pulaski, Randolph, Richmond, Screven, Seminole, Stewart, Sumter, Thomas, Twiggs, Quitman, Washington, and Worth counties (Goad 1979:81-88). The closest sources are situated in Screven County, about 100 km from the study area and appear to be Eocene/Oligocene boulders and materials associated with Briar Creek. Some of this material ranges from black or tan to red, yellow, cream and white. It has a dull luster and is grainy. The chert is fossiliferous and, when heated, it resembles the Claiborne Stage cherts (described below) in color and texture. Other materials include dark grays, slate blacks, clears, creams, browns, whites, and blue-whites or mottled colors. Textures can range from smooth to grainy, although all are

fossiliferous with a dull, soft luster. Heat treatment produces a glossy surface with yellow to dark red colors (Goad 1979:23-24).

In nearby Burke County cherts are associated with deposits of the Claiborne Group of the Eocene Epoch. These cherts range from red, yellow, cream, and blue to mottled or striped. They typically have a dull sheen and are heavily fossiliferous. When heat treated the material may be pink, dark red, or even bright orange. The fossil inclusions turn white, giving the chert a "spotted" appearance. Porous flints, jasper, and chalcedony are also present with the cherts in these deposits (Goad 1979:21).

In Laurens County, about 150 km to the northwest, are cherts of the Oligocene Epoch. This chert is typically dense, compact, vitreous, and ranges in color from translucent to red, yellow, or brown. There are few fossil inclusions. Heat treated specimens are typically glossy and red or deep brown. Occasional jasper nodules are associated with the chert (Goad 1979:24).

The geomorphology of the area is greatly influenced by the raising and lowering of the sea during the Pleistocene and (to a somewhat lesser extent) the Holocene epochs. Glaciers repeatedly advanced and retreated in the northern portions of the United States. While these ice masses did not extend southward to Georgia, they nevertheless dramatically affected the area's geology by influencing the ocean levels which generated a series of marine terraces (Hodler and Schretter 1986:27; Looper 1982:2-3; Campbell et al. 1996:19).

Fort Stewart incorporates portions of the Sunderland, Wicomico, Penholoway, Talbot, and Pamlico terraces which range in elevations from 52 m above mean sea level (amsl) to 8 m amsl (Hodler and Schretter 1986:27; Campbell et al. 1996:19-22). In contrast, Hunter Army Airfield is situated at the edge of the Princess Anne and Pamlico terraces and partially on a barrier island facies (Campbell et al. 1996:20).

Today, modern soil science identifies 13 general soil series in Long County and eight in Tattnall County. Overall, the soil profiles in both counties exhibit soil characteristics that reflect "moderately well drained and somewhat poorly drained soils on ridges, and poorly drained and very poorly drained soils on flood plains and in broad low areas, depressions, marshes, and drainageways" (Looper 1982:1). Of the 13 general unit descriptions in Long County only five are found in both survey areas of Fort Stewart — the Blanton-Fuquay-Foxworth Association, the Stilson-Pelham-Fuquay Association, the Leefield-Pelham-Mascotte Association, the Ellabelle-Johnston Association, and the Osier-Bibb Association. The Blanton-Fuquay-Foxworth Association and the Stilson-Pelham-Fuquay Association are characterized by moderately well drained and well drained sandy soils on nearly level to very gently sloping surfaces. The Leefield-Pelham-Mascotte Association is characterized by somewhat poorly to poorly drained sandy soils commonly found on low lying upland ridges, depressions and drainages. The Ellabelle-Johnston Association and the Osier-Bibb Association are characterized by very poorly drained sandy soils on nearly level flood plains, as well as in bays, depressions, and drainages (Looper 1982). Of the eight general soil unit descriptions found in Tattnall County five are found in the western portion of survey tract "A". These include the Tifton-Fuquay-Pelham Association, the Leefield-Irvington-Pelham Association, the Kershaw-Bonifay Association, the Pelham-Leefield Association, and the Osier-Pelham Association. The Kershaw-Bonifay Association is characterized by poorly drained and somewhat poorly drained loamy sand commonly found on broad dunelike upland. The Leefield-Irvington-Pelham Association and Tifton-Fuquay-Pelham Association is characterized by excessively well drained to poorly drained loamy sand commonly found broad uplands and depressions. The Pelham-Leefield Association and Osier-Pelham Association are characterized by poorly drained to very poorly drained loamy to clayey subsoil on upland flats, terraces, and flood plains.

Survey tract "A," in Long and Tattnall counties, is characterized by Albany, Blanton, Cowarts, Dothan, Ellabelle, Fuquay, Leefield, Osier-Bibb, Pelham, Stilson and Tifton soils. These soils remain fairly stable throughout the project area with the most prominent soil type

being very poorly drained Ellabelle, poorly drained Pelham loamy sand, and large pockets of well drained Fuquay loamy sand. The other soil types in survey tract "A" are the somewhat poorly drained Albany sand, the moderately well drained Blanton sand, the well drained Cowarts loamy sand, the well drained Dothan loamy sand, the somewhat poorly drained Leefield loamy sand, the poorly drained Osier-Bibb loamy fine sand, the moderately well drained Stilson loamy sand, and the well drained Tifton loamy sand.

Survey tract "B," in Long county, is characterized by Albany, Chipley, Ellabelle, Fuquay, Johnston and Bibb, Leefield, Mandarin, Mascotte, Ocilla, Pelham, and Stilson soils. Much like survey tract "A," these soils also remain fairly stable throughout the project area with the most prominent soil type being very poorly drained Ellabelle and poorly drained Pelham loamy sand. The other soil types in survey tract "B" are the somewhat poorly drained Albany sand, the moderately well drained Chipley sand, the well drained Fuquay loamy sand, the very poorly drained to poorly drained Johnston and Bibb sandy loam, the somewhat poorly drained Leefield loamy sand, the somewhat poorly drained Mandarin fine sand, the poorly drained Mascotte fine sand, the somewhat poorly drained Ocilla loamy fine sand, and the moderately well drained Stilson loamy sand.

Since the effects of erosion and soil deposition characteristics are important in determining site probability within the confines of Fort Stewart, typical soil profiles as described by Looper (1982) are briefly discussed below. The occurrence of these soils in the survey tracts are also shown in Figures 8 and 9.

The **Albany Series** are characterized by somewhat poorly drained soils with a 0 to 2% slope. The water table for the Albany series fluctuates between 30 cm and 76 cm in winter and early spring. Albany series soils exhibit a multiple A horizon. The A1 horizon at approximately 20 cm in depth is a very dark gray (10YR 3/1) loamy fine sand. From 20 cm to a depth of 66 cm is an A21 horizon of light brownish gray (2.5Y 6/2) fine sand. The A22 horizon to a depth of 124 cm, is a hard and compact brownish yellow (10YR 6/6) sandy clay loam. Below this, to 1.37 m, is the B1 horizon a yellowish brown (10YR 5/6) sandy clay loam with a number of medium distinct light gray (10YR 6/1) and olive yellow (2.5Y 6/6) mottles. The B21t horizon extends to 1.57 m. A mottled yellowish brown (10YR 5/6) sandy clay loam this horizon also contains light gray (10YR 6/1), an olive yellow (2.5Y 6/6), and a yellowish red (5YR 5/8) soil. The B22t horizon, which extends over 2 m below the surface, typically contains mottled light brownish gray (10YR 6/2), brownish yellow (10YR 6/6), and yellowish red (5YR 4/8) soils.

The **Bibb Series**, characterized by Bibb sandy loam in association with a 0 to 2% slope, exhibits two A horizons. The A11 horizon dips to about 13 cm and consists of very dark gray (10YR 3/1) sandy loam. From 13 cm to 33 cm there is an A12g horizon of dark grayish brown (10YR 4/2). There is no B horizon. The C horizon consists of a gray (10YR 5/1) sandy loam. The water table for the Bibb series fluctuates between 15 cm and 46 cm below surface in winter to the middle of spring.

The **Blanton Series** consists of moderately well drained soils that have a 0 to 3% slope. The water table in the Blanton series fluctuates between 1.52 m to 1.83 m in winter to the middle part of spring. The Ap Horizon, where present, is approximately 0 to 20 cm in depth and consists of a dark grayish brown (10YR 4/2) loamy sand. From 20 cm to 81 cm is an A21 horizon of yellowish brown (10YR 5/4) sand. The A22 horizon extends 1.17 m below surface and contains a yellowish brown (10YR 5/6) sand. The B21t horizon, at 1.30 m below surface, is a light yellowish brown (10YR 6/4) sandy loam. The B22t horizon, at 1.68 m below surface, is a strong brown (7.5YR 5/6) sandy clay loam with common medium prominent red (2.5YR 5/8) mottles. The B23t horizon extends approximately 2 m in depth, and includes mottled brownish yellow (10YR 6/6), light gray (10YR 7/2), and yellowish red (5YR 4/6) sandy clay loams.

The **Chipley Series,** are moderately well drained with a 0 to 4% slope. The water table fluctuates between depths of 60 cm and 91 cm in

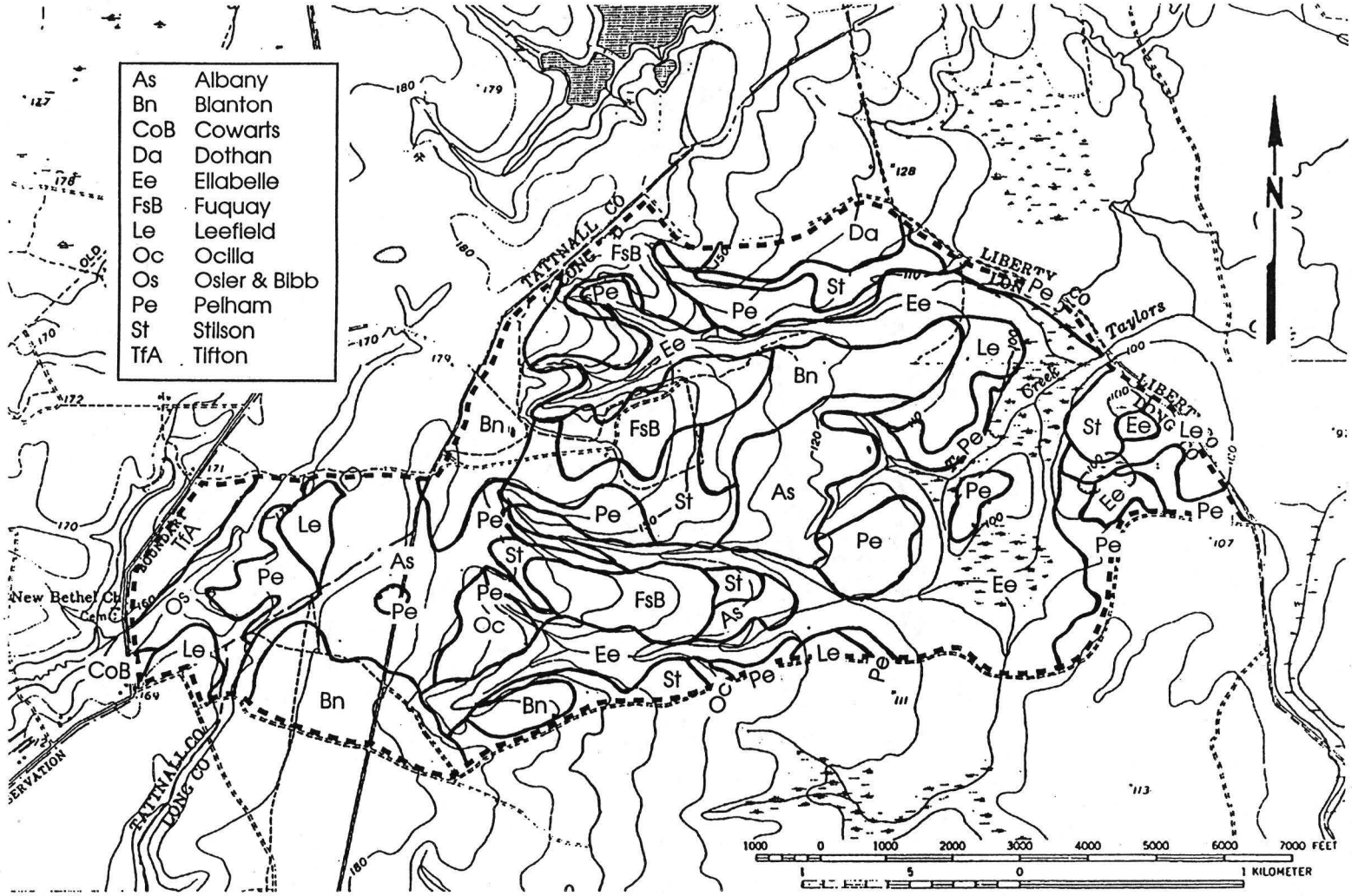


Figure 8. Soils of survey tract "A" (adapted from Looper 1982 and Paulk 1980).

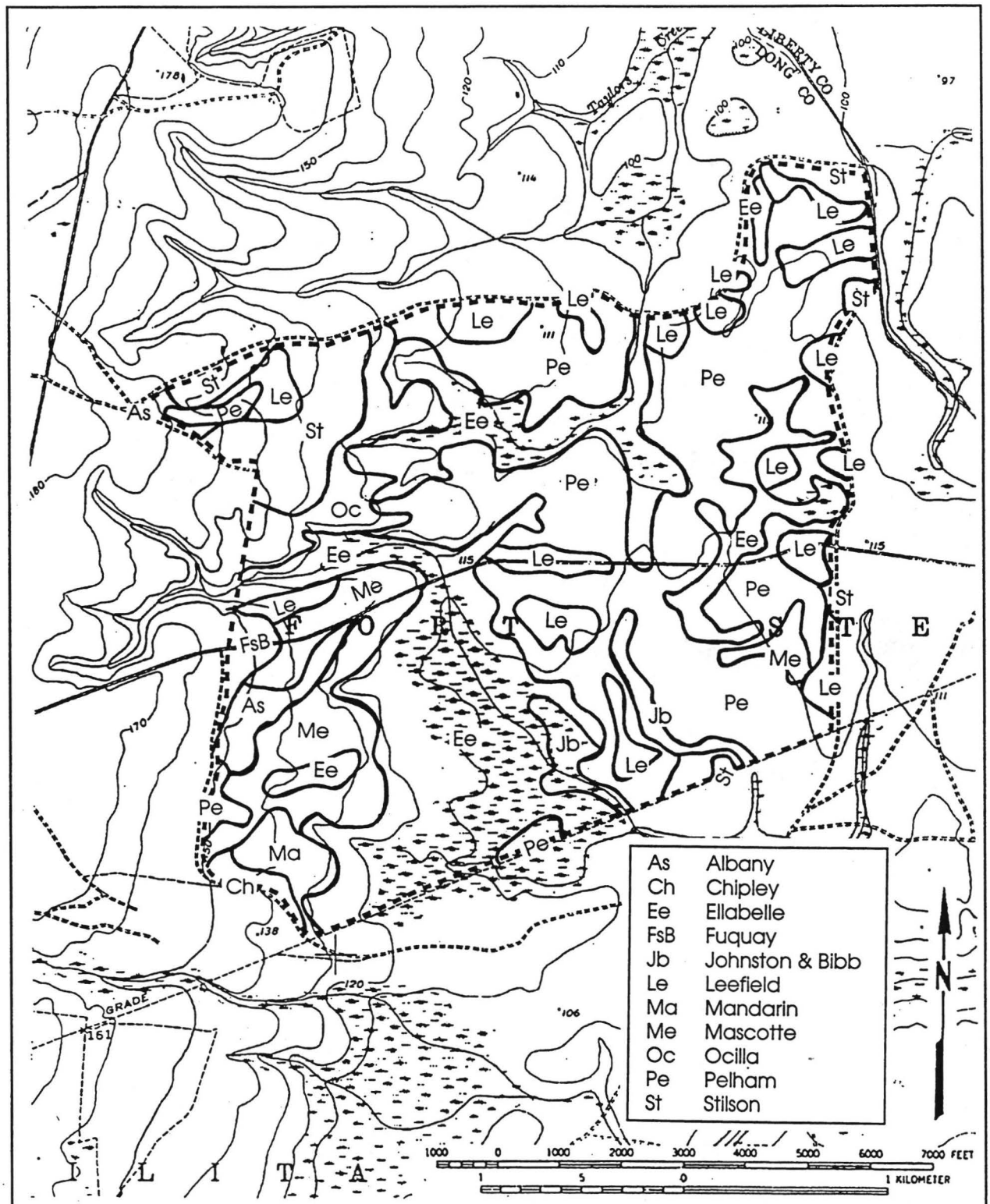


Figure 9. Soils of survey tract "B" (adapted from Looper 1982).

winter and early spring. The A1 horizon is a dark gray (10YR 4/1) sand which extends 0 to 15 cm below the surface. The C1 horizon is a pale yellow (2.5Y 7/4) sand and extends from approximately 15 to 40 cm below surface; C2 is a light yellowish brown (2.5Y 6/4) sand which extends from 40 cm to 1.13 m; C3g is a light gray (10YR 7/2) sand with common medium distinct strong brown (7.5YR 5/8) mottles, and C4g is a light gray (10YR 7/1) sand with few fine distinct strong brown (7.5YR 5/8) mottles.

The **Cowarts Series** consist of soils that are well drained and may have slopes from 2 to 8%. A typical Cowarts sand will have an Ap horizon of very dark grayish brown (10YR 4/2) loamy sand to a depth of 18 cm. The A2 horizon is light yellowish brown (10YR 6/4) loamy sand between 18 cm and 28 cm below surface. Underlying the A are four B horizons. The B1 horizon is 28 cm to 43 cm deep and is a yellowish brown (10YR 6/6) sandy clay loam; B21t is a brownish yellow (10YR 6/6) sandy clay loam with common medium prominent red (2.5YR 4/8) mottles and extends from 43 cm to 85 cm; B22t is 85 cm to 1.4 m deep and is a brownish yellow (10YR 6/6) sandy clay loam with common medium prominent red (2.5YR 4/8) and yellowish red (5YR 5/8) mottles and few medium distinct light gray (10YR 7/1) mottles; and B23t extends to 1.75 m and is a reticulately mottled light gray (10YR 7/1) and red (2.5YR 4/8) sandy clay with brownish yellow (10YR 6/8) mottles.

The **Dothan Series** typically have well drained soils on a slope of 0 to 5%. The Dothan series contains two A horizons and four B horizons. The Ap horizon extends down 18 cm and is a grayish brown (10YR 5/2) loamy sand. The A2 horizon ranges from 18 cm to 25 cm in depth and is a light yellowish brown (10YR 6/4) loamy sand. Underlying the A horizon is B1, a yellowish brown (10YR 6/4) sandy loam. Horizon B21t ranges from 33 cm to 95 cm and is a yellowish brown (10YR 5/8) sandy clay loam. The B22t horizon extends to 1.13 m below the surface and is a yellowish brown (10YR 5/8) sandy clay loam with common medium prominent yellowish red (5YR 5/8) and red (2.5YR 4/6) mottles. The B23t horizon is a mottled brownish yellow (10YR 6/8), dark reddish brown (5YR 3/4), light gray (10YR 7/2) and light red (10YR 6/8) sandy clay loam which extends to 1.75 m in depth.

The **Ellabelle Series** has very poorly drained soils with a slope of 0 to 2%. "The soil is commonly ponded in wet seasons" (Looper 1982:63) but is generally stationary at 30 cm below surface from late fall to middle spring. This series contains only one A horizon, A1, which extends 58 cm below the surface. This soil is a black (10YR 2/1) loamy sand, suggestive of extensive chemical reduction. Underlying the A horizon are three B horizons. Horizon B1g extends from 58 cm to 79 cm and is a dark gray (10YR 4/1) sandy loam. Horizon B21tg is composed of a gray (10YR 5/1) sandy loam with fine distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/6) mottled soils. The B22tg horizon is a mottled gray (10YR 5/1), brownish yellow (10YR 6/6), and strong brown (7.5YR 5/6) sandy clay loam.

The **Fuquay Series** has well drained soils that commonly have a slope from 0 to 5%, The Ap horizon is usually dark grayish (10YR 4/2) loamy sand to 22 cm. Below the Ap soils, to a depth of 74 cm, is the A2 horizon characterized by brownish yellow (10YR 5/6) loamy sand. The B1 horizon, to a depth of 84 cm, consists of a brownish yellow (10YR 6/6) sandy loam with a few medium distinct strong brown (7.5YR 5/8) mottles. This is followed by the B21t horizon which ranges to a depth of 1.04 m and is a brownish yellow (10YR 6/6) sandy clay loam with a common medium distinct strong brown (7.5YR 5/8) and yellowish red (5YR 5/8) mottles. The B22t horizon is a mottled brownish yellow (10YR 6/6), strong brown (7.5YR 5/6) and red (2.5YR 5/8) sandy loam that runs to 1.17 m in depth. Horizon B23t extends to 1.93 m and is a mottled strong brown (7.5YR 5/6), light brownish gray (10YR 6/2), and red (2.5YR 4/8) sandy loam.

The **Johnston series** is characterized by very poorly drained soils with a 0 to 2% slope. The water table for the Albany series fluctuates between surface water to 45 cm below surface from late fall to early summer. Johnston series soils contain only two horizons. The A1 horizon at approximately 1.08 m in depth is a black (10YR

2/1) mucky loam. This overlays a Cg horizon of light brownish gray (10YR 6/2) sandy loam which extends to a depth of 1.5 m.

The **Leefield Series** generally have somewhat poorly drained soils and a slope of 0 to 2%. The water table ranges from 46 cm in the winter to 76 cm in the early spring. The Leefield series contains two A horizons and four B horizons. The A1 horizon extends down 30 cm and is a very dark gray (10YR 3/1) loamy sand, while the A2 horizon ranges from 30 cm to 65 cm in depth and is a light yellowish brown (10YR 6/4) loamy sand. Underlying the A horizon to 75 cm is B1 which is a light yellowish brown (10YR 6/4) sandy loam with common medium distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/8) mottles and common fine light gray mottles. Horizon B21t ranges from 75 cm to 1.15 m and is a light yellowish brown (10YR 6/4) sandy clay loam with a common medium distinct yellowish brown (10YR 5/6) and light gray (10YR 7/2), with strong brown (7.5YR 5/8) mottles. The B22tg horizon extends to 1.43 m below the surface and is a light gray (10YR 7/1 sandy clay loam with common coarse distinct yellowish brown (10YR 5/6) and strong brown (7.5YR 5/8) mottles with a few prominent yellowish red mottles.

The **Mandarin Series** are somewhat poorly drained soils with slopes ranging from 0 to 2%. The water table for Mandarin soils ranges from 46 cm in summer to 1.07 m in the winter. Mandarin series soils contain three A horizons with two re-occurrences and three B horizons with one re-occurrence. The A1 horizon extends to 18 cm below surface and is a dark gray (10YR 4/1) fine sand. The A21 horizon is a gray (10YR 6/1) fine sand and ends at 23 cm. The A22 horizon ranges from 23 cm to 31 cm below surface and contains a light brownish gray (10YR 6/2) fine sand. Horizon B21h is a very dark brown (10YR 2/2) fine sand ranging to 41 cm below surface. B22h ends at 50 cm and is a very dark grayish brown (10YR 3/2) fine sand. Horizon B3 extends to 61 cm below surface and is a brown (10YR 5/3) fine sand. The re-occurrence of the A horizon extends from 61 cm to 1.14 m deep. The A'21 horizon is a light brownish gray (10YR 6/2) fine sand and the A'22 horizon, beginning at 91 cm, is a light gray (10YR 7/2) fine sand with common medium distinct yellow (10YR 7/6) mottles. Horizon B'2h concludes at 1.83 m below surface and is a dark brown (7.5YR 3/2) fine sand with common medium distinct black (10YR 2/1) and distinct black (10YR 2/1) mottles.

The **Mascotte Series** consists of poorly drained, moderately permeable soils with slopes ranging from 0 to 2%. The Mascotte series water table ranges from surface water to a depth of less than 31 cm in summer and winter. Mascotte series soils contain two A horizons with one re-occurrence and two B horizons with two re-occurrence. The A horizon extends to 15 cm below surface and is a very dark gray (10YR 3/1) fine sand. The B2h horizon is a very dark brown (10YR 2/2) fine sand in the upper part and dark reddish brown (5YR 3/2) fine sand in the lower part. The B3 horizon ranges from 46 cm to 53 cm below surface and contains a pale brown (10YR 6/3) fine sand with common medium distinct dark brown (10YR 3/3) mottles. Horizon A'2 is a light gray (2.5YR 7/2) fine sand with common coarse distinct light yellowish brown (10YR 6/4) mottles ranging to 81 cm below surface. B'21tg ends at 1.22 m and is a light gray (10YR 7/1) sandy clay loam with many coarse prominent yellowish brown (10YR 5/8) mottles which contain few medium prominent red (2.5YR 4/6) mottles. Horizon B'22t extends to 1.78 m below surface and is a mottled light gray (10YR 7/1), yellowish brown (10YR 5/8), and red (2.5YR 4/6) sandy clay loam.

The **Ocilla Series** soils consist of somewhat poorly drained soils that have a slope of 0 to 2%. The water table in these soils fluctuates between a high point of 31 cm to 76 cm in depth. Ocilla series soils contain three A horizons and three B horizons. Horizon A1 extends to approximately 15 cm and is a dark grayish brown (10YR 4/2) loamy fine sand. The A21 horizon extends to 53 cm in depth and is a pale brown (10YR 6/3) loamy fine sand. The A22 horizon ranges from 53 cm to 86 cm and is a pale brown (10YR 6/3) loamy sand with few faint yellowish brown mottles. Underlying the A horizon is the B1 horizon which extends to approximately 97 cm and is a yellowish brown (10YR 5/6) sandy loam with common medium distinct light brownish gray (10YR 6/2) mottles. Horizon B21t goes to 1.27 m in depth and is a

yellowish brown (10YR 5/6) sandy clay loam with common medium distinct light gray (10YR 7/2) mottles and few medium distinct pale brown (10YR 6/3) mottles. The B22t horizon levels off at 1.83 m below surface and is a mottled light gray (10YR 7/2), yellowish brown (10YR 5/6), and yellowish red (5YR 4/8) sandy clay loam.

The **Osier Series** soils are poorly drained, rapidly permeable soils that have a slope of 0 to 2%. The water table stands between 30 cm or less. The A11 horizon reaches to 13 cm in depth and is a dark grayish brown (10YR 4/2) loamy sand. The A12 horizon extends to 28 cm and is a very dark grayish brown (10YR 3/2) loamy sand. There is no B horizon in Osier series soils. The C1g horizon extends to 91 cm below the surface and is a light brownish gray (10YR 6/2) loamy sand. Horizon C2g reaches 1.27 m and is a light gray (10YR 7/2) sand and C3g is the same soil to a depth of 1.65 m.

The **Pelham Series** consists of poorly drained moderately permeable soils with a slope of 0 to 2%. The water table fluctuates between a high of 15 cm to a low of 46 cm. This series contains three A horizons and three B horizons. The A1 horizon goes to 15 cm below surface and is a black (10YR 2/1) loamy sand, going to a grayish brown (10YR 5/2) loamy sand in the A21 horizon down to a depth of 41 cm. The A22 horizon extends to 64 cm and is a gray (10YR 6/1) sandy loam. The B1g horizon extends to 84 cm below surface and is a gray (10YR 6/1) sandy loam with common medium distinct strong brown (7.5YR 5/6) mottles. Horizon B21tg goes to 1.23 m below surface and is a gray (10YR 5/1) sandy clay loam with common medium distinct brownish yellow (10YR 6/6) and light yellowish brown (2.5YR 6/4) mottles. The B22tg horizon extends 1.60 m below surface and is a gray (10YR 6/1) sandy clay loam with common medium distinct brownish yellowish red mottles.

The **Stilson Series** are moderately drained soils with a slope from 0 to 2%. They have a water table that fluctuates between 76 cm and 91 cm. Stilson series soils contain two A horizons and five B horizons. The A1 horizon reaches to 15 cm in depth and is a dark grayish brown (10YR 4/2) loamy sand. The A2 horizon extends to 74 cm and is a pale yellow (2.5YR 7/4) loamy sand. Underlying the A horizon is a B1 horizon that is a brownish yellow (10YR 6/6) that reaches to 89 cm. Horizon B21t extends 1.09 m in depth and is a brownish yellow (10YR 6/6) sandy clay loam with common medium distinct strong brown (7.5YR 5/8), red (2.5YR 4/8), light gray (10YR 7/2), and yellow (10YR 7/6) mottles. The B22t horizon extends 1.55 m in depth and is a reticulately mottled brownish yellow (10YR 6/6), light gray (10YR 7/2), strong brown (7.5YR 5/8), and red (2.5YR 4/8) sandy clay loam. The B23tg horizon is a light gray (10YR 7/1) sandy clay loam with common medium distinct brownish yellow (10YR 6/6) and strong brown (7.5YR 5/8) mottles and a few fine faint red mottles. Horizon B24tg reaches to 1.83 m in depth and is a reticulately mottled light gray (10YR 7/1), red (10YR 5/8), and strong brown (7.5YR 5/8) sandy clay loam.

The **Tifton series** soils consist of deep well drained soils that have a slope of 0 to 8%. Tifton series soils contain one A horizon and four B horizons. Horizon Apcn extends to approximately 23 cm and is a dark grayish brown (10YR 4/2) loamy sand. This overlays a B1cn horizon which extends to 30 cm in depth and is a yellowish brown (10YR 5/6) sandy loam. The B21tcn horizon ranges from 30 cm to 90 cm and is a yellowish brown (10YR 5/8) sandy clay loam. The B22t horizon which extends to approximately 1.20 m is a yellowish brown (10YR 5/8) sandy clay loam with common medium prominent yellowish red (5YR 5/6) and red (2.5YR 5/8 mottles. The B23t horizon levels off at 1.55 m below surface and is a mottled yellowish brown (10YR 5/8), red (10YR 4/6), yellowish red (5YR 5/6), and light gray (10YR 7/1) sandy clay loam.

Artifacts recovered from the three prehistoric sites in survey tract "A" were found in somewhat poorly drained Albany soil (9LG100), very poorly drained Ellabelle soil (9LG105), and somewhat poorly drained Leefield soil. The prehistoric isolated occurrences were found in somewhat poorly drained Albany soil (9LG116, 9LG118), very poorly drained Ellabelle soil (9LG104), and moderately well drained Stilson soil (9LG6, 9LG107, 9LG108). Artifacts recovered

from the 17 historic sites were found in somewhat poorly drained Albany soil (9LG23, 9LG101, 9LG102, 9LG103, 9TT143), moderately well drained Blanton soil (9LG97, 9LG106, 9LG117), well drained Fuquay soil (9LG28, 9LG94, 9LG99, 9LG114), somewhat poorly drained Leefield soil (9TT142), and moderately well drained Stilson soil (9LG110, 9LG112). Artifacts recovered from the historic isolated occurrences were found in somewhat poorly drained Albany soil (9LG116), moderately well drained Blanton soil (9LG96, 9LG98, 9LG119), well drained Dothan soil (9LG113), very poorly drained Ellabelle soil (9LG111), well drained Fuquay soil (9LG9, 9LG95), and somewhat poorly drained Leefield soil (9LG109).

Artifacts recovered from the three prehistoric isolated occurrences in survey tract "B" were found in very poorly drained Ellabelle soil (9LG123) and poorly drained Mascotte soil (LG124-9LG125). Artifacts recovered from the four historic sites were found in poorly drained Mascotte soil (9LG47), moderately well drained Stilson soil (9LG120-9LG121), and somewhat poorly drained Leefield soil (9LG130). The remaining historic isolated occurrences were found in poorly drained Mascotte soil (9LG125), and moderately well drained Stilson soil (9LG126-9LG129).

Although this is a very small sample, of the prehistoric sites recovered from survey tract "A" both were found on either somewhat poorly drained to very poorly drained soils (specifically Albany and Ellabelle series) and well drained Stilson soils. The 15 historic sites suggest that a greater range of site characteristics may have been important, since they occur on somewhat poorly drained Albany, moderately well drained Blanton, well drained Fuquay, somewhat poorly drained Leefield, and moderately well drained Stilson soils. Artifacts recovered from the three historic sites in survey tract "B" were found in well drained Fuquay and moderately well drained Stilson soils. Nevertheless, this is a very small sample and considerably more research is necessary.

Climate

The southeastern Atlantic coast of Georgia is usually hot and humid in the summer with a winter that is cool to occasionally bitter cold. Georgia's highest temperatures normally occur in July and, in the Fort Stewart area the summer average daily temperature is 80°F. The lowest temperature occurs in January and winter temperatures average 53° F. The average growing season in the Fort Stewart area ranges from about 260 to 270 days, while at Hunter Army Airfield the growing season may be as long as 290 days (Hodler and Schretter 1986:40).

Occasional tropical storms, coupled with the flow of moist air from the Gulf of Mexico over the warm land surface, make the late summer the season of greatest rainfall in southeastern Georgia, while November is typically the month of lowest rainfall for the project area (Clements 1989:53; Hodler and Schretter 1986:38). The total annual precipitation is 1.25 m. Of this, 60% usually falls from April through October, which includes the growing season for most crops (Looper 1982:2). During 1954, one of the driest years on record, the rainfall for the project area was only about 70 cm — about 55% of the normal rainfall. Campbell et al. (1996:13) suggest that floods are actually more common, typically occurring in the winter and spring. The flood-producing rains are usually caused with slow-moving low pressure centers and may be associated with tropical storms or prolonged thunder storm activity.

During the late Pleistocene and early Holocene periods temperatures were considerably cooler than they are today. Temperatures began to moderate and approach modern temperatures along the Southeast Atlantic Slope around 7,000 B.P. (Wright 1976:594). A more thorough discussion is provided below relating vegetational change to these climatic ranges.

Floristics and Paleoenvironment

The Coastal Plain in the vicinity of Fort Stewart is today dominated by longleaf-slash pines with oaks and yellow poplar being found as

common associates (Hodler and Schretter 1986:52; Shantz and Zon 1936:5). Although such forests of large, equal-age pines were noted by explorers in the seventeenth century, this vegetation is largely the result of intentional action by humans. Described as a fire subclimax forest, these monospecific stands are maintained by periodic burning which exclude the young of most other arboreal species.

Küchler (1964) identifies the potential natural vegetation, that expected without the interference of humans, as a Southern Mixed Forest. These are tall forests of broadleaf deciduous and evergreen and needleleaf evergreen trees. The dominants are beech, sweet gum, southern magnolia, white oak, and laurel oak. Slash and loblolly pines are also dominants, although they would not be as prevalent as they are in today's fore subclimax setting. Other components include maples, hickories, dogwood, and palmetto (Küchler 1964:112). Along the major drainages Küchler identified Southern Floodplain Forests — dense, medium tall to tall forests of broadleaf deciduous and evergreen trees and shrubs and needleleaf deciduous trees such as tupelo, oak, bald cypress, along with maples, hickories, ash, sweet gum, oaks, and elm (Küchler 1964:113).

Today, suggestions of these potential natural forests are found only in more mesic, edaphically favorable and fire-protected areas (Campbell et al. 1996:14). In such areas, drainage, soil types, elevation, and slope are the major factors affecting vegetation and a range of different species, including live oaks, hickories, palmettoes, hollies, and bays will be found.

Today, survey tract "A" and survey tract "B" are heavily managed. They are dominated by open pine forests with very sparse understory vegetation (Figures 10 and 11).

In the 1860s less than 30% of what would later become Liberty and Long counties (but known at that time as Liberty County) was improved for cultivation (Hilliard 1984:Map 44). By the 1940s only about a third of these two counties was cropped with most of the land being forested (Hodler and Schretter 1986:127). At the time Fort Stewart was acquired by the U.S. Army, Campbell et al. (1996:10) report that most of the plots were small to medium size; most being woodlots. Today, about 20% of Liberty and Long counties is farmland, with about 13% actually under cultivation (Clements 1989:251, 255). Cotton and rice were historically produced on the bottomlands (Campbell et al. 1996:79-80). By the late antebellum there seems to have been a focused shift to small tracts of peas, sweet potatoes, and corn. Rice was largely abandoned by 1860 and cotton was little more than a subsidiary interest (Campbell et al. 1996:106-107). By the postbellum cotton and corn were still common, although potatoes, oats, cane, peaches, figs, grapes, and pecans were also being grown, at least in small quantities (Knight 1917:1256). Lumber and live stock were also growing industries. Today the principal agricultural activity is ranching, while the principal crops are corn and soybeans. Logging remains a substantial economic activity (Clements 1989:251, 255).

Naval stores have, historically, played a major part of Georgia's Coastal Plain economy since the nineteenth century (Campbell et al. 1996:79-80). Obtained by heating the rosin-filled heartwood of pine logs, pitch and tar were replaced as major exports by turpentine and rosin. These products are distilled from the raw gum exuded by living pine trees. Growing through the late antebellum and early postbellum, Georgia dominated U.S. gum production, accounting for about 50% by the 1890s. It lost considerable ground to adjacent Florida in the next four decades, but recovered its lead in the late 1930s and early 1940s. In 1970, Georgia contributed about 85% of the U.S. gum naval store production, although the significance of the gum market has declined dramatically in the twentieth century as the tall oil or sulfate production increased. Exacerbating the situation is a continuing severe labor shortage brought about by the low wages, the seasonal nature of the work, and its focus on hot and dirty manual labor (Hodler and Schretter 1986:148).

Pollen cores obtained from the Southeast Coastal Plain indicate a sequence of successional

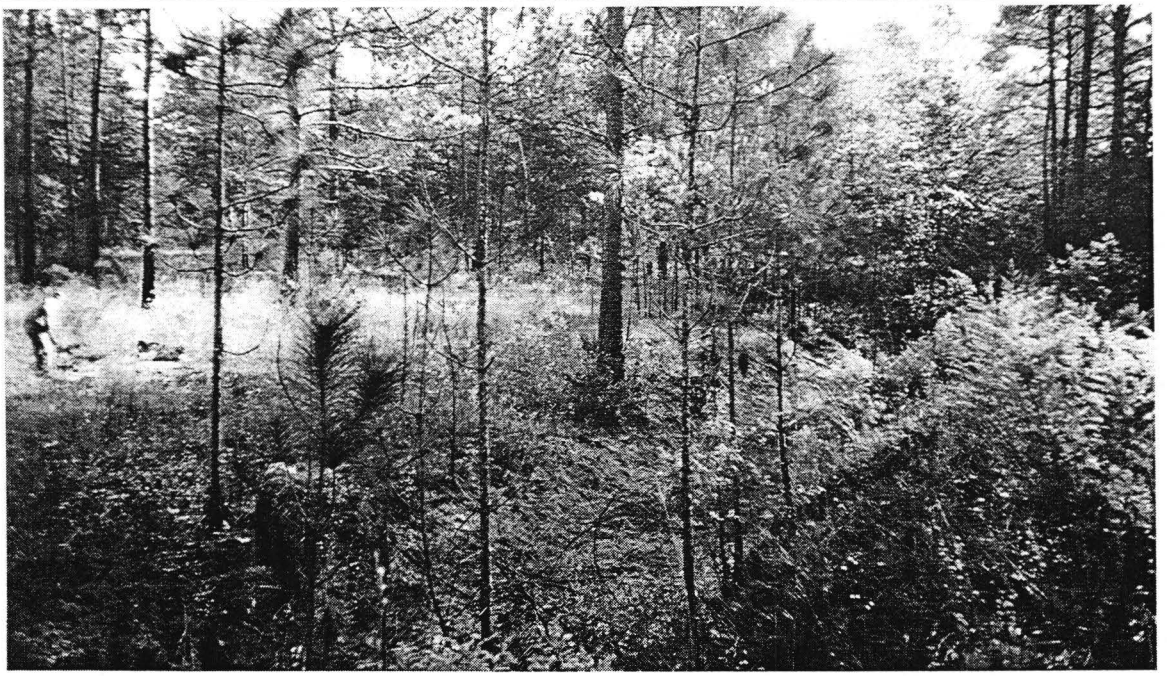


Figure 10. Typical vegetation and survey conditions in Survey Tract "A".

Figure 11. Typical vegetation and survey conditions in Survey Tract "B"

forest types from the Full Glacial through the Post Glacial periods (Watts 1971; Whitehead 1965). Before strong evidence of human population (pre-15,000 B.P.), cold-adapted vegetation predominated by spruce and jack pine was found in the Piedmont and Coastal Plain area. Other less common species included oak and ironwood. All of these species suggest a much colder and drier environment than found today (Watts 1980:326). Some have suggested that this climate was much like today's eastern Canadian boreal forests, dominated by pine and spruce distributed in a mosaic pattern of stands within sedge-dominated prairies. Campbell et al. (1996:34), however, also present evidence suggesting that while the climate was colder, it may *not* have been drastic enough to support a full boreal forest.

The somewhat warmer and moister environment evidenced in the Late Glacial (15,000 to 10,000 B.P.) is associated with an increase in deciduous species. Northern hardwoods, such as oak, hickory, beech, birch, and elm began replacing the spruce and jack pine populations. This change corresponds with warmer summer temperatures and colder winter temperatures as well as an increase in precipitation. It is during this period that there is the first moderately well documented evidence for human occupation (Watts 1980; Sassaman et al. 1990). This period was a transitional period between the glacial Late Pleistocene and the essentially modern climatic conditions of the Holocene. The resulting mesic forest, with its relatively high percentages of beech and hickory, has no modern analog and was the result of the cool, moist conditions which characterized this transition.

During the Post Glacial (10,000 B.P. to present) oak and hickory dominated the region. Other species such as walnut, hemlock, and hazelnut disappeared from the pollen record. By 9,500 B.P. hickory and ironwood species declined and were replaced by sweetgum and blackgum. These changes prior to 7,000 B.P. suggest periods of rapid warming and increased moisture (Watts 1980; Watts and Stuiver 1980). It has been observed that these very rapid environmental changes would have created a dynamic ecosystem requiring constant adaptive adjustments on the part of early groups (Cable and Mueller 1980:7).

In the Georgia Coastal Plain southern pine communities displaced the oak-dominated forests between 8,000 and 6,000 B.P. which led to a decrease in mast production (Sassaman et al. 1990:22; Campbell et al. 1996:35-36). This vegetational change probably had an effect on prehistoric land use during certain times of the year, since nut masts were probably more isolated and concentrated rather than widespread. Coupled with these vegetational changes was a cooler, moister climate (Watts 1971 and 1980).

Campbell et al. (1996:35-39) suggest a possible cause and effect relationship between climate changes beginning about 8,300 B.P. and the rise of pine forests. They note that as the climate shifted from less rainfall to a seasonably variable moisture regime there was also an increase in lightning-producing spring storms. These storms, they suggest, created the right conditions for frequent natural fires which would encourage, and maintain the presence of longleaf pine. They note that even today the mesic climatic regime "continues to provide an ideal environment for the longleaf pine and the Southern Evergreen Forest" (Campbell et al. 1996:38).

From about 5,000 B.P. and continuing to the present, Whitehead (1973) found pine increasing slightly, although oak appeared to remain dominant in natural forest stands. The precontact environment of the Piedmont Southeastern United States was termed "temperate deciduous forest" by Shelford (1974:56-88) with oak and hickory interspersed with pine, maple, ash, and other deciduous species (for a graphic representation see Shantz and Zon 1936). Küchler (1964) further supports this reconstruction.

Campbell et al. (1996:38-39) also suggest that other vegetational "adjustments" have included the filling in of Carolina bays with peat to form extensive pocosin wetlands and the expansion of coastal swamps under the influence of rising sea levels.

By the historic period the lower coastal plain was dominated by loblolly pine. Although the

name means, literally, "mud puddle," and was likely applied since the tree grew on wet soils, the loblolly is also known as the "bull pine" because of its prodigious size and remarkable ability to invade dry, flat terrain and even the hilly uplands. The pines formed vast, open forests interrupted only by the occasional inland swamp and its accompanying hardwoods.

This area of the Coastal Plain, the soil, and the vegetation frequently attracted the attention of observant commentators. In the early eighteenth century John Wesley mentioned that:

> the Land is of four Sorts, Pine-barren, Oakland, Swamp and Marsh. The Pine-Land is of far the greatest Extent, especially near the Sea-Coasts. The Soil of this, is a dry, whitish Sand, producing Shrubs of several sorts, and between them a spiry, coarse Grass which Cattle do not love to feed on. But here and there is a little of a better kind, especially in the Savannahs (so they call the low, watry Meadows, which are usually intermixt with Pine-Lands) (Reese 1974:232-233).

Throughout Georgia's history, these "pine-barrens" were known as land of less value than other, more fertile tracts. Even as early as 1740, William Stephens provided an account which observed, "the American dialect distinguishes land into pine, oak and hickory, swamp, savannah, and marsh" (Frech and Swindler 1973:79). He commented that where oak and hickory tree grew "the soil is in general of a strong nature, and very well esteemed for planting, being found by experience to produce the best crops of Indian Corn, and most sorts of grain" (Frech and Swindler 1973:79). The swamp soils, with their "black moulds" were best for rice. The savannahs and marshes, while producing no trees, did contain large numbers of "canes," which were reported to be excellent winter forage for cattle. Only for the pine lands, "of a sandy surface," could Stephens find nothing encouraging to say.

English occupation of the countryside, including occupation of Georgia's pine barrens, gradually changed its appearance. The pines which dominated the topography, for example, began to give way to scrubby hardwoods by the early 1800s (Silver 1990:187). It is almost certain that the process was largely completed by the mid-1800s. Yet there were other, equally momentous changes. Turkeys and other wild fowl were less common, while the flocks of Carolina parakeets and passenger pigeons approached extinction. Buffaloes were already gone from the neighboring Piedmont. In the lowland swamps the beavers, otters, and minks were close to gone, as were other occasional visitors such as bears, wolves, panthers, and bobcats.

The countryside was becoming increasingly dominated by small farms. The new ecology, created by clearing and farming grains, encouraged flocks of quail. While the minks and otters gave way to hunting pressures, they were quickly replaced by the opossum. By the nineteenth century the most common animals were the cattle, hogs, and sheep brought by the Coastal Plain settlers. Silver notes that, "fewer canebrakes and overgrazed mixed hardwood forests attest to the forage habits of these Old World Beasts" (Silver 1990:187-188). The changes were dramatic, gradually giving rise to the lower Coastal Plain we know today.

PREHISTORIC AND HISTORIC OVERVIEW

Previous Research

Relatively few in-depth studies have been conducted at Fort Stewart. The majority of those readily available have been contracts, let by the United States Army, in an effort to determine the extent of cultural resources located on the base.

The earliest study of any intensity was that conducted in 1980 and 1981 by Professional Analysts, Inc. (Miller et al. 1983). The goal of the study was to conduct a sample survey in order to produce a predictive model for the entire facility (Campbell et al. 1996:174). The sample universe was established as all fire breaks less than 3-years old. These were stratified by soil association and a pedestrian survey was conducted. Only the actual fire break was examined and no shovel tests were excavated. Campbell et al. (1996:174) report that the total coverage was 370 km. Assuming that the fire breaks were an average of 3 m in width, this would account for about 111 ha. This represents a 0.1% survey of the entire base.

In addition to the stratified sample survey, a judgmental survey was conducted of base food plots and an effort was apparently made to relocate a number of previously identified sites on the base (Campbell et al. 1996:176). In all, 29 previously recorded archaeological sites were revisited.

The survey identified a total of 85 sites, including 50 prehistoric sites, 17 historic sites, and 18 prehistoric and historic sites. In all, 145 components were represented. This survey found a density of about 1 site per ha. The site types included lithic scatters (many without diagnostic remains), villages, a burial mound, and riverine camps. Historic sites dated primarily to the late nineteenth century. Historic research also identified, as potential sites, 24 historic properties.

This study forms the nucleus of the fort's predictive model. Miller et al. (1983 quoted in Campbell et al. 1996:203) identified four probability zones:

> Very high probability — locations which include well-drained bluffs along the Ogeechee and Canoochee Rivers.
>
> High probability — areas where well-drained soils, such as Craven, Lakeland, Tifton, Pooler, Ocilla, Fuquay, and Stilson, occur. Also included areas in proximity to high order streams.
>
> Medium probability — areas which include all of the soil types that are not excessively drained or very poorly drained, representing the vast majority of the base. These areas essentially represent portions of Fort Stewart for which the survey coverage was inadequate to allow any reasonable prediction of probability.
>
> Low probability — areas where the soils, such as Rutledge, Mandarin, Osier, Johnston, Ellabelle, and Bibb, are either excessively drained or very poorly drained.

Campbell et al. (1996:211-228) provide a detailed analysis of this model. Most importantly, they provide a detailed listing of soils, assigning a probability ranking. While the single minded reliance by Miller et al. (1983) on soil and drainage to predict archaeological probability can be criticized, it does offer an initial focus for future efforts at Fort Stewart. This current study, in fact, is at least partially based on the early predictive

work by Miller and his colleagues. In the **Conclusions** to this study some further evaluation of its applicability is provided.

Other investigations in the area have included a 1988 survey conducted in the Brigade Maneuver area of Fort Stewart by Carolina Archaeological Services (Jackson et al. 1988). This survey tract is situated due north of survey tract "A" across Fort Stewart Road 6. Although this tract included 1,507 ha it is of limited comparability since it involved no shovel testing — all of the survey was pedestrian (Jackson et al. 1988:22; Campbell et al. 1996:181).

Forty-three archaeological sites were reported. The prehistoric sites included Early Archaic and Early Woodland remains, while the historic sites dated primarily from the late nineteenth and early twentieth centuries (Campbell et al. 1996:81).

Four site types were identified during the Carolina Archaeological Services survey:

> Site Type 1- Prehistoric campsites or lithic .scatters — contain diagnostic or non-diagnostic lithic debris and/or ceramic sherds indicative of aboriginal subsistence activities.
>
> Site Type 2 - Late nineteenth and early twentieth century farmsteads and activity loci — contain diagnostic historic material, often in association with brick, features and/or aligned trees, or ornamental vegetation (i.e., orchards, groves, gardens).
>
> Site Type 3 - Historic Cemeteries — contain marked or unmarked human interments.
>
> Site Type 4 - Multicomponent sites (historic farmsteads/activity locus and prehistoric activity locus) — contain debris associated with historic farmsteads or activity loci, plus prehistoric activities.

An Early Archaic and Late Woodland geographical overlap was found within the Carolina Archaeological Services study (Jackson et al. 1988:46).

The study, in general (see Campbell et al. 1996:212-213), supports the probability assessments established by Miller et al. (1983). Jackson et al. (1988), however, note that site density may be higher than initially suggested for Fort Stewart. Although only 1 site per 24.6 ha was recorded, few of the high site potential soils were encountered in their survey (Campbell et al. 1996:181).

In 1995-96 the Chicora Foundation conducted a 522 ha shovel test survey of the area south of survey tract "A" and east of survey tract "B," known as the JAECK Drop Zone (Trinkley et al. 1996). Relatively few sites were recovered during this survey. These included two prehistoric sites (9LG44 and 9LG45) and two historic sites (9LG31 and 9LG47). Site 9LG47 was initially outside the study area but is included in the present study in survey tract "B".

A second area containing 241 ha, known as the Taylors Creek tract, was conducted at the same time as the above survey in the Brigade Maneuver area. This included the small community of Taylors Creek. A total of three prehistoric sites (9LI357, 9LI358, and 9LI359) and one historic site (9LI311) containing 14 loci, the historic town of Taylors Creek, were identified during the survey.

Of the sites recorded during the 1995-96 Chicora Foundation survey the prehistoric sites contained artifacts which temporally span the Early Archaic to Mississippian periods. The three historic sites contained artifacts from the late eighteenth century to the twentieth century.

The study, in general (see Trinkley et al. 1996:113-123), did not confirm or deny the probability assessments established by Miller et al. (1983). Trinkley et al. (1996), however, note that although the site density is slightly lower in the

JAECK Drop Zone area (0.76 sites per km²) for that suggested for Fort Stewart (1.1 sites per km²), the historic town of Taylors Creek exhibits a much higher site density (2.5 sites per km²).

Although the Campbell et al. (1996) predictive model essentially relies on soil drainage, the Chicora (1996) study determined that site probabilities are best based on a broad range of factors. As for the prehistoric sites encountered, there may be additional factors affecting site location such as distance to water. For historic sites, these locations seem to be determined by commercial, industrial, and agricultural needs rather than on soils, water, or topography.

Prehistoric Overview

Overviews for Georgia's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared for Fort Stewart. Of special interest is the Historic Preservation Plan for Fort Stewart which provides a lengthy overview of the prehistoric cultural sequence (Campbell et al. 1996:45-69). There are, in addition, some "classic" sources well worth attention, such as Williams' edited works of Antonio J. Waring, Jr. (Williams 1968).

These can be supplemented with a broad range of theses and dissertations, such as Lewis Larson's examination of coastal subsistence technology (Larson 1969), Chester DePratter's discussion of Southeastern chiefdoms (DePratter 1983), or Morgan Crook's examination of Mississippian community organization along the coast (Crook 1978).

Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Anderson and Sassaman (1996) for the Early Archaic, Sassaman and Anderson (1994) for the Middle and Late Archaic and Anderson et al. (1992) for the Paleoindian. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the current study. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States:* Paleoindian to World War I. Figure 12 offers a generalized view of Georgia's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points; side scrapers and end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). Some even suggest pushing the beginning date to as early as 14,000 B.P. (Oliver 1981). Non-fluted points such as the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, are occasionally seen as representatives of the terminal phase of the Paleoindian Period. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] For the North Carolina area Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted and there appears to be no such continuum in Georgia.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian

[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

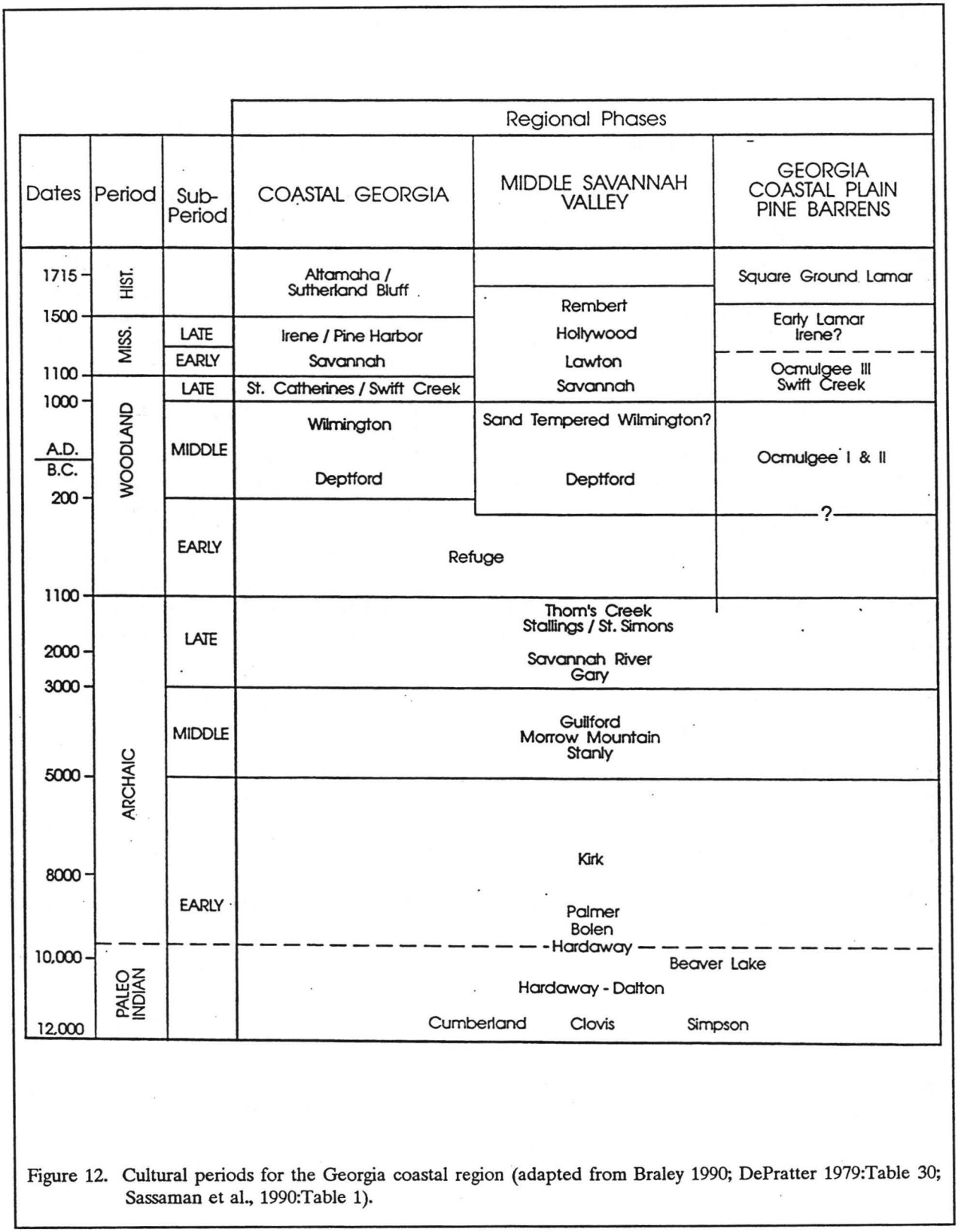


Figure 12. Cultural periods for the Georgia coastal region (adapted from Braley 1990; DePratter 1979:Table 30; Sassaman et al., 1990:Table 1).

tools, most notably fluted points, is rather sparse for Georgia (Ledbetter et al. 1992). In spite of this, the distribution offered by Anderson (1992:Figure 5.1) reveals a rather general, and widespread, occurrence throughout the region. The recognition of Paleoindian sites in Georgia is hindered not only by a lack of research, but also by the small size of typical sites (often the Paleoindian component may be recognized by a single tool) and the heavy amount of reworking and curation seen in Paleoindian tools from Georgia (Ledbetter et al. 1992:261).

Distinctive projectile points include lanceolates such as Clovis, Dalton, Suwannee, and perhaps the Hardaway (Anderson 1990:7-9). During the later portion of the Paleoindian, many researchers (see Snow 1977:3-4, Figure 1 for example) borrow from Florida and suggest that these more classic large lanceolate points were replaced by smaller points with concave bases, such as the Sante Fe, and Beaver Lake (Bullen 1975:45-47; Milanich and Fairbanks 1980:45). In addition, points such as the Bolen Plain and Bolen Beveled (Bullen 1975:44, 49-53; Milanich and Fairbanks 1980:45) are thought to be intermediate between the Late Paleoindian and Early Archaic in much the same way as the Palmer of South and North Carolina is regarded.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992 for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

According to Campbell et al. (1996:47-49) no Paleoindian sites have been identified on Fort Stewart through professional research (excepting the recovery of a Dalton projectile point from 9LI276 and a Hardaway-Dalton from 9BN36), although at least one local collector has reported early points from the general area. This near absence is attributed to the lack of readily available raw materials. Should Paleoindian materials be encountered, Georgia has developed a rather detailed preservation plan which outlines a broad range of appropriate research questions (Anderson et al. 1990).

The prevalence of Paleoindian occupation is dramatically increased, however, if Bolen and Palmer points are included. Campbell et al. (1996:52) note that several sites have produced these materials, which they attribute to the Early Archaic. In addition, Snow comments that "large choppers, unifacial blades, and scrapers" are found in the Coastal Plain, but can be attributed to the Paleoindian Period only on the basis of their "patination; some appear chalky, and display a general likeness to Paleo-Indian material of known antiquity" (Snow 1977:3).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture.

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery."

Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

The review of available survey data by Campbell et al. (1996:52-54) suggest that there was a noticeable population increase from the Paleoindian to the Late Archaic (where at least 14 components were isolated). The increase in components over time certainly corresponds with generalized findings of other researchers, and may be tentatively associated with a greater emphasis on foraging. Campbell et al. (1996:52) note, however, that considerably fewer Early and Middle Archaic remains are found than seemingly should be present, based on comparable surveys elsewhere in the region. They suggest this may be the result of the sites being "buried in deep subsurface contexts" (Campbell et al. 1996:52). Unfortunately, they provide no substantive reasoning, geomorphological studies, or rationale for this assessment. Their comparative data consists of only one other survey, the Ebenezer Watershed (Fish 1976). Nor do they explore other explanations for the disparity between Archaic settlement in the Fort Stewart area and in this one other study area.

Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer and Bolen points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies. Other hallmarks of the Early Archaic are often considered to include a continued reliance on high quality lithic raw materials, a highly curated tool kit, high geographic mobility, and periodic aggregation of band-sized groups (see Anderson and Hanson 1988; Daniel 1992).

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites may be thought of as special purpose or foraging sites.

There are several intensively occupied Early Archaic sites which are of special importance in our understanding of this period, including the Lewis East and Pen Point sites in South Carolina (for a review, see Sassaman and Anderson 1994:84-85) and the Taylor Hill site in Georgia (Elliott and Doyon 1981).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Halifax and Stanly projectile points. Ledbetter remarks that a possible regional variant includes the side-notched or corner-notched points similar to Halifax, as well as an elongated point known as the Brier Creek Lanceloate (Ledbetter 1995:12; Michie 1968; Sassaman and Anderson 1994:27). Also observed during this period is the MALA (Middle Archaic-Late Archaic) point, which are typically made from heat-treated chert and considered by some to be a regional variant of the Benton type (see Sassaman 1985; see also Sassaman and Anderson 1994:27-29 for a more updated discussion).

Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). Closer to Georgia, there is Ledbetter's (1995:12) work at Pen Point on the Savannah River, as well as work at Fort Gordon (9CB81, see Braley and Price 1991), and 9RI178 (Elliott et al. 1994).

There is good evidence that Middle

Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Curated tools are less common. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Coastal Plain settlement models for the Middle Archaic have traditionally focused on the near absence of diagnostic material. It has been suggested that the "Pine Barrens" were unattractive or could not support dense occupation. This view has been espoused by Larson (1980). As Sassaman and Anderson (1994:149) suggest, it may be that Middle Archaic groups avoided the coastal plain not because the area was impoverished, but rather because the available resources were patchy and this "patchiness" resulted in high "hidden" costs such as constant movement, increasing specialization, and the need to store larger quantities of food.

Sassaman and Anderson (1994:150-152) also briefly review the evidence supporting a focus on swamp floodplains during the Middle Archaic, noting that while such environmental settings can be difficult to identify, they do seem to be associated with large, multicomponent sites. In addition, they illustrate the mounting evidence to support seasonal rounds or seasonal transhumance between the coast and the interior (e.g., Milanich 1971).

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). In addition, research in the Georgia Coastal Plain suggests the presence of Gary Points, having a triangular blade, squared shoulders, a contracting stem, and a rounded or occasionally pointed base (see Smith 1978 for examples from Laurens County, Georgia). These Late Archaic people continued to intensively exploit the uplands although the available Fort Stewart data for this period reveal that the sites are spread over a variety of environmental zones with no obvious patterning (Campbell et al. 1996:52-53).

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type, developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery. This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont where it was originally developed (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44; Sassaman 1993:16-41). This innovation is of special importance along the Georgia and South Carolina coasts.

Coupled with the presence of fiber-tempered Stallings or St. Simons pottery (Griffin 1943; DePratter 1991:159-162) are also a broad range of worked bone and shell items, such as engraved bone pins, whelk columella beads, and antler projectiles. Coupled with these artifacts are shell rings — dough-nut shaped heaps of shells

ranging from only a few feet in height to over 20 feet (see Trinkley 1985 for a general overview). There is evidence that these shell rings represent gradually formed habitation sites with occupation taking place on the rings. The sites appear to reflect permanent, year-round occupation suggesting that the coastal St. Simons and co-evil Thom's Creek (found primarily northeast of the Savannah River in South Carolina) groups were able to schedule their subsistence activities to allow stable settlements (Trinkley 1980).

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Coastal Plain of Georgia without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

Sassaman (1993:55) recalls the cautions of Joseph Caldwell, who found "the regional landscape of the Early Woodland ceramic traditions" a "fascinating array of local developments and diverse extralocal influences." As a consequence, the Early Woodland becomes quickly confused and difficult to interpret.

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings, St. Simons, and (to a lesser extent) Thoms Creek series (Griffin 1943; Trinkley 1976; DePratter 1991:159-162). The fiber-tempered Stallings and St. Simons wares and the sandy paste Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976).

Others would have the Woodland beginning about 3,000 B.P. with the introduction of the Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (DePratter 1976, 1991:163-167; Waring 1968). There is evidence that the punctated and dentate surface decorations are gradually replaced by plain and simple stamped treatments. Sassaman et al. (1990:191) report a distribution similar to the earlier fiber-tempered and Thom's Creek wares, and suggest that the Refuge wares evolved directly from these earlier antecedents.

On the Georgia coast the Refuge has been subdivided into three subphases, with plain and dentate stamping found during the entire period. Toward the end, linear and check stamping is introduced, sometimes with grog or clay tempering. Typically these sites are found on ridges or other high, sandy ground, although DePratter also notes that many sites have been inundated by the rising sea level and are situated in the marsh (DePratter 1976:6-8).

Oelmer ceramics, which admittedly are poorly understood (DePratter 1979:177), are likely a Refuge-Deptford transition. DePratter describes the pottery's check stamping as consisting:

> of small, rhomboid or diamond checks, carefully applied to the vessel surface without overstamping. The [Oelmer] complicated stamping is somewhat unusual, consisting of small, carefully executed line-filled triangles, nested diamonds, and other motifs (DePratter 1979:117).

He observes that the largest sample comes from the Oelmer site and that other researchers have occasionally called the pottery Deptford Geometric Stamped. The pottery is so uncommon that it may well represent only a variety of either Refuge or Deptford.

In spite of the relative lack of detailed investigations at Early Woodland sites, it seems likely that the subsistence economy was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish. This is based on an impression that there was a continuation of a generalized Late Archaic pattern, which may or may not be appropriate.

Fort Stewart has apparently produced no Refuge sites and Campbell et al. (1996:60) doubt that such sites will exist in the Coastal Plain unless possibly associated with earlier fiber-tempered sites. They note, however, that the Georgia State Site files report the presence of at least four Refuge/Oelmer components at sites on Fort Stewart (Campbell et al. 1996:57). Consequently, it is difficult to assess the potential for Refuge sites at Fort Stewart.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,500 B.P. to about 1,200 B.P. The most characteristic pottery of this time period is Deptford, although both Swift Creek and Wilmington are likely late additions. Regardless, the Middle Woodland is best understood in the context of Deptford, which has been carefully described by DePratter (1979:118-119, 123-127), who suggests two divisions with check stamping and cord marking gradually being supplemented by complicated stamping. The introduction of clay or grog tempered Wilmington wares follows on the heels of the Deptford phase.

We do not, however, mean to imply that the origin of the Middle Woodland is well understood. In fact, Sassaman takes some pains to emphasize that the transition from Refuge to Deptford is not well understood:

> the Refuge-Deptford problem is the result of numerous regional processes that converge in the Savannah River region between 3000 and 2000 B.P. The sociopolitical entities that existed on the coast and in the interior during the fourth millennium dissolved after about 2400 B.P., resulting in the dispersal of small populations across the region. . . Pottery designs changed from highly individualistic punctation and incision to the (seemingly) anonymous use of dowels for stamping. . . the use of a carved paddle for simple stamping should mark the "blending" of Refuge and Deptford culture, or, more accurately, reflect the subsumption of Refuge culture by the expanding Deptford complex.
>
> To complicate matters, the tradition of cord-wrapped paddles makes its way into the South Carolina area sometime after 2500 B.P. (Sassaman 1993:118-119).

The work by Milanich (1971) and Smith (1972), coupled with the considerable additional site-specific research (see, for example, DePratter 1991; Sassaman 1993:110-125; Thomas and Larsen 1979) provides an exceptional background for this particular phase. Milanich's (1971) interpretation of a coastal-estuarine settlement model with interior occupation limited to short-term extractive activities, while still useful, has been modified through the discovery of a number of interior base camps. In fact, there seems to be evidence for a number of interior seasonal or perhaps even permanent base camps, although there is as yet no convincing evidence of horticulture. Anderson (1985:48) provides a brief overview of some very significant concerns. He notes that Milanich's interpretation that the interior river valleys were used by small, residentially mobile foraging groups which dispersed from large coastal villages is clearly not correct. In fact, just the opposite appears more likely, with coastal use and

settlement being seasonal (Anderson 1985:48-49).

DePratter (1979:119, 128-131; 1991) takes the position that Wilmington pottery post-dates Deptford, ushering in the use of grog or clay as a tempering material in the late Middle Woodland. The check stamping and complicated stamped motifs found in the Deptford continue, except with clay tempering for a short time. Called Walthour, these wares are described by DePratter (1991:174-176), but they apparently existed for only a short period of time before being completely replaced by cord marking (DePratter 1979:119).

Wilmington phase sites are rather poorly understood in the Georgia Coastal Plain. No only has there been little effort to develop settlement models incorporating the Wilmington, there is very little technological research on the pottery itself. The potential importance of the Wilmington phase is perhaps evidenced by Snow's (1977) survey of the Ocmulgee Big Bend area, where large quantities of what he called "Ocmulgee I" pottery was found. He specifically states that this ware "is not Wilmington" (Snow 1977:42), noting that while there is some clay tempering (certainly not the abundant grog tempering of classic Wilmington), much of the pottery has a sandy paste (Snow 1977:36). Perhaps the most distinctive characteristic of this pottery (which is associated with at least one burial mound) is a heavy folded rim. Folded rims seem to gradually drop out, while the paste becomes increasingly more gritty in succeeding Ocmulgee II and III types.

Curiously, coupled with the coastal Wilmington material is what the W.P.A. researchers called Chatham County Cord Marked (DePratter 1991:179-180), a grit-tempered (rather than clay-tempered) heavy cord marked pottery. DePratter remarks this is possibly related to the "sand tempered" pottery that Stoltman (1974:63), further up the Savannah River, called "Wilmington."

It seems that Georgia, just like South Carolina and North Carolina, is struggling to comprehend, and deal with, a broad array of Middle Woodland cord marked pottery.

Although Deptford pottery is well recognized, the associated lithic technology is not. For Florida, Milanich and Fairbanks (1980:75-76) mention only that "medium-sized triangular" points are present. Yadkin-like triangular points are reported to be found with Wilmington sites (Anonymous 1940). Snow (1977:Figure 13) reports a broad range of small triangular points with his Ocmulgee I, II, and III cord marked pottery. The bulk of these appear to resemble more traditional Yadkin and Caraway points (Coe 1964:30-32, 49).

The Middle Woodland cannot be fully appreciated without reference to Hopewellian influences, whether the presence of coastal sand burial mounds and their evidence of status differences (e.g., Thomas and Larsen 1979) or the presence of occasional exchange goods. Sassaman et al. note that while there is a lack of "obvious" Hopewellian influence in the Savannah area, there is nevertheless evidence of a "higher order of sociopolitical complexity" (Sassaman et al. 1990:14). They note that the broad similarities in ceramic design evidence the movement of ideas, or "interprovincial integration," not seen in the Early Woodland. The presence of coastal shells found at interior sites demonstrates the movement of goods.

At Fort Stewart the Middle Woodland period is better represented than the Early Woodland. Ten sites have produced Deptford remains. No sites have been reported with Wilmington pottery, although it is not clear from the summary by Campbell et al. (1996:56-57) if any of the Deptford sites produced sandy paste "Wilmington" pottery. Campbell et al. (1996) fail to discuss lithic resources, so it is not possible to ascertain if Middle Woodland lithic scatters have been encountered.

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas and Georgia there were major cultural changes, such as the continued development and elaboration of agriculture, the coastal South Carolina and Georgia groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of

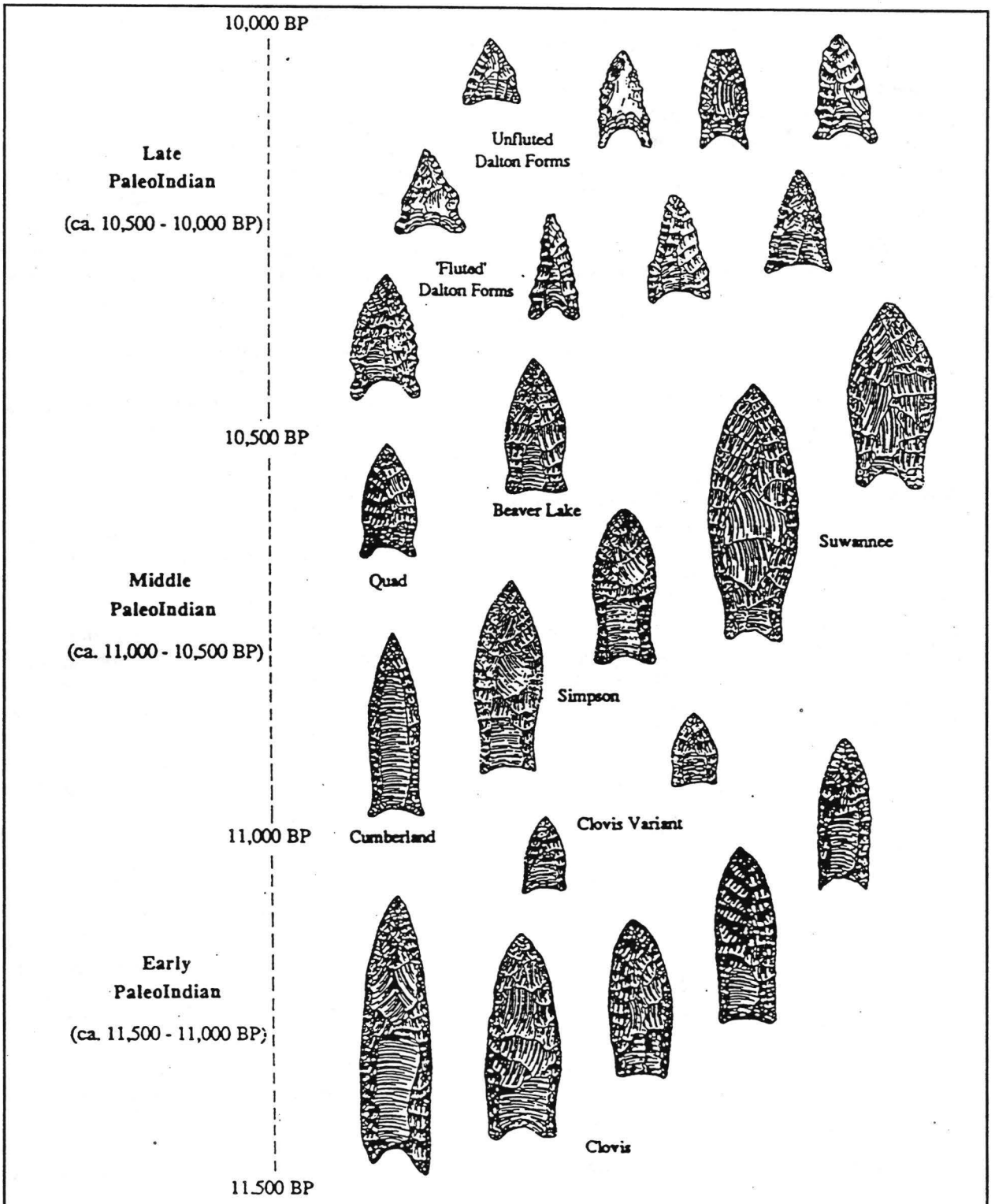


Figure 13. Diagnostic Paleoindian projectile points and suggested chronology for Georgia and the Carolinas (adapted from Anderson 1992:Figure 3.1)

Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971). Anderson (1994:366-368) provides a basic review of the Late Woodland and Mississippian ceramic sequence at the mouth of the Savannah River. This review is particularly useful since it also compares and contrasts these developments to those in the middle and upper reaches of the Savannah (Anderson 1994:368-377).

Milanich (1971:148-149) and Caldwell (1970:91) saw the St. Catherines pottery, which seemingly characterizes the Late Woodland, as an important aspect in the gradual progression from Deptford to Wilmington to St. Catherines to Savannah. Perhaps the most succinct summary of the Georgia Late Woodland St. Catherines phase is that offered by DePratter and Howard (1980:16-17). Significantly, they note that most of the Georgia data comes from burial mound excavations, "because only limited village [and presumably shell midden] excavations have been conducted" (DePratter and Howard 1980:16). Even with burials there is a limited range of artifact types — shell beads, worked whelk shell bowls or drinking cups, bone pins, and triangular projectile points. Not only is little known about village life, nothing is known concerning residential structures and there is no good evidence of agricultural crops. Once again, the Late Woodland is presented as little more than an extension of the previous Middle Woodland lifeways.

DePratter (1979:119) provides a generalized introduction to the St. Catherines phase, noting its original definition by Caldwell (1971) and remarking that the ceramics are:

> characterized by finer clay tempering than that of preceding Wilmington types and by the increased care with which the ceramics were finished. The lumpy contorted surface of Wilmington types was replaced by carefully smoothed and often burnished interiors and exteriors (DePratter 1979:119).

DePratter also notes that the temper in the St. Catherines pottery consists of "crushed sherd or crushed low-fired clay fragments" (DePratter 1979:131). One of the few studies of prehistoric temper which involved detailed chemical and petrographic analyses included a sample of six St. Catherines sherds (Donahue et al. n.d.) The study found that the trend toward decreasing grain size of the aplastic component, begun in the Middle Woodland, continues into the Late Woodland. In contrast, the grog inclusions are coarse, ranging from about 2 to 3 mm, and they contain quartz grains (perhaps reflecting the temper of the crushed sherds).

More recent investigation of St. Catherines pottery in South Carolina found that while there is considerable variability in both size and frequency of temper, there is no compelling evidence that sherds were being crushed and used as temper. The most likely explanation for the observed similarity of both paste and temper is that the temper represents dried lumps of clay which have been incorporated back into the clay during the forming of vessels. On the other hand, the same study also found that there appear to be distinct chemical differences between the paste and temper. This suggests that the dried clay used as tempering was perhaps "left-over" from earlier potting episodes (Trinkley and Adams 1994:58-60).

Although the conventional wisdom is that the St. Catherines phase drew to a close around A.D. 1150, there is mounting evidence that the phase may extend into the thirteenth or fourteenth century A.D. (see Trinkley and Adams 1994:108-110, 114-115). There may be a blurring of Middle and Late Woodland lifeways well into later periods. The resulting cultural conservativism may help explain the presence of relatively few large Late Woodland villages and the apparent absence of corn agriculture until very late along the coast.

On the coast, Hopewellian influences may be more obvious than originally thought, if the multitude of sand burial mounds being investigated

by the American Museum of Natural History are as early as reported. For example, the investigations at South End Mound II on St. Catherines Island suggest the earliest burial, placed in a pit about A.D. 1000, was associated with a copper sheet, had copper earspools, and included a diabase-like pendant (Larsen and Thomas 1986:25).

Moving away from the coast and into the inner Coastal Plain there is considerably less data. It is difficult, for example, to determine how far inland St. Catherines wares are reported, or if they exist at all. Once again relying on Snow's examination of the Ocmulgee Big Bend area, there is no evidence of St. Catherines pottery. Instead, it seems that the cord marked Ocmulgee wares fill the gap. Snow even mentions that his Ocmulgee III pottery, which is found with small triangular points, shows "some traits suggestive of closer ties with coastal Savannah II Cordmarked ceramics" (Snow 1977:43), suggesting that the Ocmulgee II wares may be Late Woodland. This may help explain why no St. Catherines sites have been found at Fort Stewart (Campbell et al. 1996:60), although clearly the lack of detailed surveys cannot be ignored.

Better known is the Swift Creek Phase, often viewed as either late Middle Woodland or Late Woodland. Swift Creek materials extend from the Gulf of Florida, where the phase was first identified (Willey 1949:378-383) into the coastal plain and piedmont of Alabama, Georgia, and South Carolina. Diagnostic artifacts include pottery with intricate, well-executed, curvilinear complicated stamped motifs. Also present are occasional suggestions of Hopewell ritual, especially among the burials. Sites include semi-permanent villages, some with burial mounds and occasionally small platform-like mounds, as well as small camps (Jefferies 1994; Keller et al. 1962; see also Sears 1956:53-54 and Sassaman et al. 1990:205-206 for regional overviews). Although there are few appropriate local studies, Snow does illustrate a number of early and late Swift Creek sherds from the Ocmulgee Big Bend area (Snow 1977:Figure 6a, 7a, 7b). This suggests that Swift Creek phase sites may be found in the Fort Stewart area.

South Appalachian Mississippian

As Schnell and Wright (1993:2) observe, "Mississippian" means different things to different people — even to its earliest researchers. To Willey (1966) it meant a particular group of traits. To Griffin (1985) it meant a complex social and technological interaction sphere. To Smith (1986) it was defined as an adaptive strategy. The meaning is further distorted, or at least affected, when the issue is viewed from a strict temporal or chronological orientation, such as this presentation (since to us, the period covers the period from about A.D. 900 to A.D. 1500).

The Mississippian is viewed rather basically by Campbell et al. (1996:61-62). They focus on a simple coastal chronology based almost entirely on the results of excavations at Irene (Caldwell and McCann 1941) and the resulting synthesis by DePratter (1979:Table 30; 1991:183-193). In this scenario the Savannah Phase, consisting of three subphases, is followed by the Irene, broken into two subphases. While following essentially the same sequences, Anderson (1994:366-368) provides considerably more detail.

The Savannah, characterized by cord marking, is seen as developing from earlier cultures. Present are flat-topped temple mounds, although these are seen by some researchers to be less common in the Altamaha region. While the settlement system is very similar to that of the Late Woodland, there are also nucleated settlements found near estuaries and along freshwater rivers further inland. Although agriculture is seen by many as almost essential, there is no good evidence for corn or other domesticated crops.

Savannah II is distinguished by the introduction of check stamping and Savannah III is defined by the presence of complicated stamping. The Savannah III Complicated Stamped pottery is primarily curvilinear, often of concentric circles or oval motifs. Sassaman et al. (1990:207) suggest that the current temporal ranges are likely too restrictive for these subphases and suggest instead broader period of perhaps A.D. 1100 to 1200 for Savannah II and perhaps A.D. 1200 to 1300 for Savannah III.

The Savannah Phase, according to Campbell et al. (1996:64), is the best represented of any period at Fort Stewart, with 35 sites producing Savannah pottery. They also note that not only are the sites more numerous, but the collections from the sites are larger, "suggesting that the Fort Stewart/Hunter Army Airfield area was a place more heavily occupied by Savannah populations than the earlier groups discussed above (Campbell et al. 1996:64). Most important among the Savannah sites appears to be the Lewis Mound (9BN39) and associated habitation area.

The Savannah phase gives way to what is often called the Irene Phase, probably beginning about A.D. 1300. The Irene I Phase is identified by the appearance of Irene Complicated Stamped pottery using the filfot cross and line block motifs. Not only are these motifs different from the earlier Savannah Complicated Stamped designs, but the Irene ware is characterized by grit inclusions and a coarse texture, compared to the Savannah's sandy inclusions and fine to medium-grained paste.

Also present in Irene collections are a range of rim decorations, including nodes, rosettes, and fillet appliques. Although incising is found in very low quantities during this early period, the succeeding Irene II phase is characterized by bold incising. The mouth of the Savannah River, however, was likely abandoned by the end of the Irene I Phase since little incising is found in this area. Anderson (1994:290-294) provides a detailed discussion of the collapse and abandonment of the Irene site, focusing on the dramatic changes and their meaning in a broader socio-political context.

Larson (1955) sought to distinguish his central coastal Pine Harbor incised material from the Irene wares of the northern coast. Braley (1990:98) suggests that the Pine Harbor material is both geographically and temporally distinct from Irene. He also suggests that the presence of the Pine Harbor Phase on the middle coast may help explain the apparent abandonment of the Savannah area, suggesting that the coastal groups shifted southward in order to make themselves more accessible to the interior Oconee chiefdoms (Braley 1990:99).

The situation, however, become considerably more muddled when the view is shifted inland — to the Pine Barrens in the vicinity of Fort Stewart, for example. Schnell and Wright explain that "almost nothing can be found in the literature" (Schnell and Wright 1993:41).

Using data from several Ocmulgee Big Bend sites, they note that there is a small collection of cord marked pottery, sometimes incorporated in an assemblage of plain and roughened wares, which dates from perhaps A.D. 800 to A.D. 1400 — falling within the temporal limits of the Mississippian. They note that Crook, who defined a Middle Ocmulgee Phase dating from A.D. 200 to about 900 and a Late Ocmulgee Phase from about A.D. 900 to 1600, distinguishes the two by increasing frequencies of triangular points and cord marked pottery. They also note that Crook suggests these occupations are associated with "conservative" cultural adaptations — an argument similar to that advanced for the late occurrence of St. Catherines wares along the South Carolina coast.

Snow, also exploring the Ocmulgee and Satilla river drainages, defines what he calls the Square Ground Lamar ceramic assemblage which apparently is coeval with late Irene (Snow 1990). Prior to this, the area is apparently dominated by the cord marked Ocmulgee III pottery. The Square Ground wares have 10 to 12 incised lines around the rim and below a stamp consisting of a central dot with four lines radiating out. Each of the resulting four quadrants is usually filled with chevrons (Snow 1990:Figure 5). He suggests that the "Square Ground Lamar pottery may equate with [the] Hitchiti people" of the lower Ocmulgee (Snow 1990:87).

The simple importance of these discussions is that there is far too little information presently available to allow any clear or certain understanding of what may be present in Fort Stewart area. Consequently, while Campbell et al. (1996:68) note that no Irene sites have been found at Fort Stewart, it seems premature to argue that Lamar influences are absent, or that the Pine Barrens were, in fact, deserted.

Protohistoric and Historic Contact

The Protohistoric ceramic assemblages along the immediate coast are typically identified as Altamaha (DePratter 1979), King George (Caldwell 1943), San Marcos (Smith 1948), and Sunderland Bluff (Larson 1978). The period is often dated from about A.D. 1550 to 1700, although Green (1991:106) argues that minimally it should be extended to 1715 in order to include the Yemassee-produced pottery of South Carolina and perhaps even as late as 1763 to coincide with Smith's (1948) St. Augustine period.

Regardless of precise dating, the ware is thought to include complicated stamping (including rectilinear and curvilinear motifs), check stamping, incising, plain, burnished plain, and a red filmed ware. Green suggests a continuum from Irene to Altamaha. Vessel forms include jars, bowls, plates, and pitchers. Some include strap and loop handles as well as foot rings, clearly revealing a strong European influence. The San Marcos pottery is associated with limestone tempering, while the Altamaha and King George wares exhibit fine grit or sand.

Snow (1990:92-93) reports a dramatic decrease in the number of Altamaha sites compared to the preceding Square Ground sites in the Pine Barrens of the Ocmulgee Big Bend area. He also notes that in addition to Altamaha ceramics, there are also examples of "Miller ceramics from the Apalachee region of northwest Florida," "a smoothed-over check stamped ware, similar to Leon Check Stamped from mission sites in north Florida" and even "Ocmulgee Check Stamped known from the Macon Plateau site." Also present are "European trade items such as glass beads and copper" (Snow 1990:93). All are representative of European contact and suggest that there was considerable movement late in the history of the region. From the historic period, Snow reports the presence of both Ocmulgee Fields, Chattahoochee Brushed, Mission Red Filmed, and Leon-Jefferson Complicated Stamped pottery — all presumably associated with Creek sites (Snow 1990:93). Unfortunately, little more than the presence of these various wares is known about the historic or contact period sites in the area.

Historic Overview

The Native American population of southeastern North America first encountered Europeans during the 1539-1542 Spanish expeditions of Hernando de Soto. It was shortly after that, in 1566, that the Spaniard Pedro Menendez de Aviles, founder of St. Augustine, met with the Guale Indians on St. Catherines Island and established a small outpost and mission on the island (Coleman 1960:1; see also Jones 1978). Georgia's coast began to export grain and citrus fruits and the early 1600s, missions were well established in fertile south and central Georgia (Hodler and Schretter 1986:70; see also Thomas 1987 and Larsen 1990).

By 1663 the ownership of lands within the confines of Georgia would become the center of great debates, dialogues, and eventually armed combat between Spanish and English interests. In granting the Carolina colony, Charles II had established that Spanish-held St. Augustine would constitute the southern boundary of the colony. With the presence of Spanish presidios and intensified English trading with Native American populations going on in the lands between Charles Towne and St. Augustine, tensions mounted between the two European powers.

The Origins of Georgia

The settlement of the Georgia colony is attributed to a perceived need by the English Crown to establish a military buffer zone between Spanish lands to the north of the Altamaha River and the English settlement of Charles Towne along the Atlantic coast of present day South Carolina (Coleman 1960:2). There was, as well, a strong Carolinian interest in tapping Georgia's potential for the deer skin trade and the use of Native Americans in military alliances against the other European powers. By effectively placing these lands under one sovereign, i.e., England, a number of these problems between England and Spain would be resolved.

The charter for the Georgia colony was granted in July of 1732, and by November James Oglethorpe set sail from England with the first

shipload of colonists (Coleman 1960:5; DePratter and Howard 1980:42). South Carolina had relinquished territory to create Georgia and the new colony's original western boundary was the "South Seas," or the Pacific Ocean. By 1763, the boundary became the Mississippi River and, in 1802, Georgia ceded to the United States what would become Mississippi and Alabama and assumed its present form (Hodler and Schretter 1986:71).

The original settlers, numbering from 114 to 125 souls, established a settlement 29 km from the coast along the Savannah River on Yamacraw Bluff on February 12, 1733 (Coleman 1960:5; DePratter and Howard 1980:42; Hvidt et al. 1980:35).

Although Oglethorpe was appointed as representative for the colony's Trustees, he actually held no legislative or authoritarian powers over the colonists. Yet, he attempted to establish the Georgia Colony in a more philanthropic manner than its neighboring colony of Carolina to the north (Coleman 1960:8). Oglethorpe's philanthropic views may have been in direct response to problems encountered by the Carolina Proprietors. The trade in deer skins and the use of Native Americans as slaves during the early colonial period had caused personal and political problems for South Carolina's elite rulers (Barr 1996). Oglethorpe hoped to eliminate this and problems associated with the ownership of African American slaves within the Georgia colony.

While South Carolina became quickly dominated by large plantations, primarily indigo and rice, which operated under the forced labor of thousands of African Americans, Oglethorpe envisioned a "kinder and gentler" colony of small land owners growing a broad range of crops. He foresaw land granted in small parcels and both slavery and rum were outlawed in 1736 (DePratter and Howard 1980:43).

Unfortunately Georgia was unable to retain its vision as a colony of sober men living off their own labor and rewards contributed through the working of small farms. Changes within the colony's structure were already evident when, in 1743, Oglethorpe was replaced by the Board of Trustees for the colony with William Stephens. As early as 1740 maximum land holdings were increased to 2000 acres, allowing the formation of small plantations (DePratter and Howard 1980:44). By 1750 the ban on the importation of slaves was dropped. Elite land owners and investors from South Carolina began to purchase lands along the Savannah River (Rowland 1987), and the timbre of Georgia society began to change. By 1750 African Americans constituted one third of Georgia's 3,000 residents (Coleman 1960:11).

In 1752 the Royal trusteeship charter expired and Georgia became a crown colony. In 1758 the Georgia Assembly established a governmental framework as part of the official church act. The province was divided into eight parishes (W.P.A. Writers' Program 1990:39. The tract which is today Fort Stewart lay primarily in the parishes of St. Johns and St. Phillips, with some western portions falling into St. Andrews Parish (Campbell et al. 1995:73).

The 1740s and 1750s were a period of growth in Georgia. Under the influence of her neighbor to the north large plantations began to dot the landscape. The introduction of upland and intertidal rice agriculture, the advent of indigo production, and the naval stores industry, brought on by world wide military and economic events (Barr 1996; Coclanis 1989; Weir 1983), would rapidly move Georgia into the mainstream of southern plantation agronomic production. Prior to the grant for the Georgia colony bounties were offered by England's parliament to encourage the growth of indigo and the production of naval stores. In 1766 the Georgia assembly, in an effort to infuse the naval stores industry, passed legislation which specified standards and volumes for the industry (Thomas 1975:2). This would enable Georgia to compete with world markets. Eventually Georgia evolved into a significant colony in its own right.

By 1776, Georgia retained very little of its pre-colonial concepts and contained a population of 40,000 to 50,000 people. Approximately half of that number were African American slaves (Coleman 1960:13; DePratter and Howard

1980:44).

Liberty County was established in 1777. At that time it included a part of present-day Bryan and Long counties, as well as all of McIntosh County. This area was settled early during the proprietary period, most notably by South Carolinians. Puritans from the abandoned town of Dorchester, South Carolina established the river port of Sunbury for the growth and export of rice, indigo, cotton, and lumber (Looper 1982:2, Groover 1987:33-34).

The Revolutionary War

Within the southern colonies the War for American Independence was similar to that of the American Civil War. Quite often family loyalties were divided between by class and family (Coleman 1960:17). Other than the capture of major population centers such as Charles Town, Savannah, and Augusta by the British, much of the war was a series of small, local engagements fought between loyalist troops and their patriot counterparts (Coakley 1989; DePratter and Howard 1980:44-45).

For most of 1779 the British held Savannah and the surrounding ground. In early fall of 1779 American and French troops made an abortive attempt to take Savannah. Among the 750 French and American casualties was Count Casimir Pulaski, for whom Fort Pulaski was named. It was not until July of 1782 that the British abandoned Savannah, ending British occupation of Georgia (Coulter 1960:146-147; DePratter and Howard 1980:45). Other nearby skirmishes include the 1776 Battle of the Rice Boats at Tybee Island and the 1778 Battle of Bulltown Swamp at Midway.

Although Oglethorpe had established a number of defensive communities west of Savannah, such as Fort Argyle on the Ogeechee River, most of these settlements failed due to the poor agricultural conditions of the Pine Barrens and lack of communication and readily available shipping route to Savannah (DePratter and Howard 1980:43; see also Figure 14). Yet, they did set a precedent for settlement once the Revolutionary War was resolved.

With the war's conclusion, major treaties and concessions from the Cherokee and Creek Indian tribes (1782-1804) allowed the full scale development of lands within central and eastern Georgia. While these cessions have no direct bearing on our understanding of the Fort Stewart area, they are a significant aspect of Georgia history. Perhaps the most succinct overview is that offered by Green (1979:24-41). He recounts the early, and peaceful start of English-Creek relationships with the 1733 and 1739 treaties skillfully brokered by Oglethorpe and explores the gradual deterioration of relationships as the English greedily lusted for expansion. Green also explores the careful balance between the French, Spanish, and English which Creek sought to maintain in order to ensure their own survival (Green 1979:26). As this power balance collapsed, the English availed themselves of the Creek's weakness. Falling deeply into debt, the Creek nation ceded additional land on the Upper Savannah.

During the American Revolution the British influence among the Creeks was skillfully maintained by Alexander McGillivray, a Creek with mixed Scots and French ancestry. Even after the Revolution, McGillivray continued to be an important council to the Creeks, as they strove to balance the power of the Americans and the Spanish. By 1812 the Creeks were deeply divided by a factional conflict which escalated into a civil war between those best described as classic nativists and those who were Anglicized. This civil war became the Creek War in 1813 as those land-hungry Americans, like Andrew Jackson, looking for a reason to intervene found an excuse to wage a "just war." Tennesseans, Georgians, and Mississippians jumped at the excuse to wage a "war of extermination" in order to free additional land. After the death of at least 3000 Creek nativists, the Treaty of Fort Jackson was signed in August 1814.

But returning to the colonial period in Georgia, economic factors had also come into play concerning the inland agronomic development of the colony. The inland areas of the state were considered better suited for the cultivation of

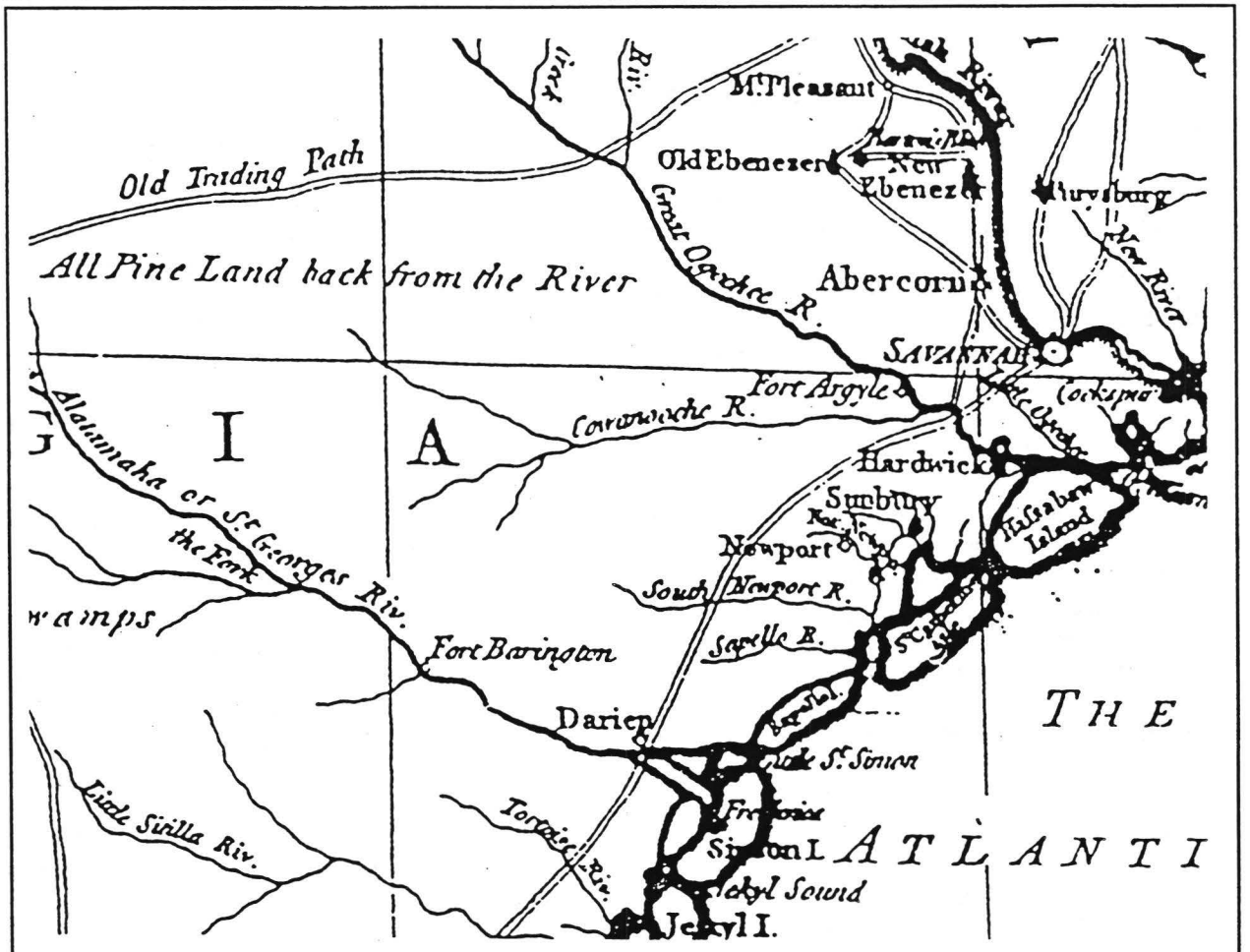


Figure 14. A portion of Hinton's 1779 *A New and Accurate Map of the Province of Georgia* showing the project area.

upland cotton as opposed to rice, indigo, and sea island cotton, which were the staple crops grown along the coast. The relative position of Liberty County in the flat pine lands of Georgia allowed the area to rapidly diversify its agricultural base. Initially, the milling of lumber and the naval stores industry were important economic commodities (Groover 1987:33-34). According to Herndon, "in the last two decades before the Revolution Georgia exported over 21,000,000 feet of lumber, 10,000,000 staves, and 36,000,000 shingles" to England (Herndon 1968:427). As well, both inland and intertidal rice, indigo, and long and short staple cotton were early crops. With the invention of the cotton gin by Eli Whitney in Savannah in 1793 new impetus was given to the commercial growth and export of upland cotton. Yet, it was principally because of the early diversification of Liberty County's agronomic base that the naval stores industry remained in its infancy. The relationship between the naval stores industry and the production of other agricultural commodities is best explained by Hernden (1968) who states that:

> [a]n examination of the manner of producing turpentine, tar, and pitch will indicate the relationship between the production of naval stores, the expansion of the rice and indigo plantation, large and small, and the lumbering industry. Of the three products that constituted the naval stores industry turpentine was of least

interest as Colonial Georgia exported less than one-seventh as much turpentine as tar and pitch. Turpentine is a sap of the pine tree obtained by making incisions, or boxes, at the base of the trunk of the tree. These boxes were usually made in January and February and the ground at the foot of the tree was cleared of leaves, brush, and undergrowth . . . Around the middle of March the sap began to distill, circulation commenced and increased as the weather became warmer; the sap boxes had to be emptied five or six times or more per season and the upper edge of the boxes chipped each week to keep the sap running. When the chill of the frost severely checked the circulation the operation was discontinued and the remainder of the year was spent in preparatory labor for the following season. The production of turpentine was a year round job rather than merely a wintertime activity and since a tree produced turpentine for several years this activity did not in itself aid in the clearing of land; consequently the turpentine industry never grew past the embryo stage.

The manufacture of tar and pitch were wintertime activities, provided a supplementary income, and aided in the "improving" or clearing of land. . . . To procure the tar from the wood a kiln was prepared in the following manner: the wood was cut into pieces two are three feet long and about three inches thick and stacked on a raised concave earthen mound, the center of which was connected to a ditch or hole on the outside by a conduit; the pile of wood was covered with a layer of pine leaves and earth and a fire started at the top of the kiln. The fire was allowed to penetrate to the bottom with a slow and gradual combustion, which forced the tar from the wood causing it to run down to the bottom of the kiln and out into the ditch or hole. The kiln was watched day and night while burning to keep the fire from breaking out and consuming the wood without producing tar. The average yield was one barrel of tar to one cord of wood. Pitch was made from tar by heating it in furnaces or large kettles . . . (Hernden 1968428-430).

As seen in Table 2, the naval stores industry never became a truly viable industry during the Colonial Period. Between 1755 and 1775 Georgia exported less than 1,000 barrels of turpentine, approximately 3,000 barrels of pitch, and a little over 4,400 barrels of tar.

It was during the post-Revolutionary War period that we see considerable evolution in the establishment of Georgia's counties. As Campbell and her colleagues observe, poor transportation networks and the increased need for governmental services lead to the creation of most new counties. Bryan County was created in 1793 and Tattnall was created in 1801 (Campbell et al. 1995:98).

The Antebellum Period

By 1820, 60% of upland farmers were growing cotton, and slavery played an ever increasing role in that growth, despite bans on slave importation during the last decades of the eighteenth century. By 1820, 44% of Georgia's population was black (DePratter and Howard 1980:45). Over 70% of the population in the area which would become Liberty and Long counties were former African American slaves. Further inland, in the "Pine Barrens," the proportion of slaves dropped to less than 10%

Table 2.
Naval Stores Exported From Georgia (1755-1775)

Year	Turpentine (bbls)	Pitch (bbls)	Tar (bbls)
1755	n/a	n/a	45
1756	n/a	n/a	n/a
1757	n/a	n/a	129
1758	n/a	n/a	n/a
1759	n/a	83	35
1760	n/a	n/a	425
1761	160	n/a	235
1762	n/a	n/a	246
1763	8	23	175
1764	19	n/a	359
1765	n/a	n/a	486
1766	82	506	723
1767	88	627	387
1768	202	496	167
1769	68	492	138
1770	103	80	105
1771	45	193	102
1772	40	364	298
1773	n/a	n/a	n/a
1774	24	40	132
1775	44	84	217
Total	877	2,988	4,404

Source: Hernden 1968:431.

(Hilliard 1984:Map 30).

During the antebellum Georgia began to increase its economic share of the American export market. The forced removal of all Native Americans from the state in 1838 accelerated the settlement of interior lands (DePratter and Howard 1980:45). Already established river and road transportation networks were augmented by railroads which connected Georgia's major port city, Savannah, with other major urban centers within the state and region. By the time of the Civil War, railroads connected Savannah to Augusta, Macon, and Waycross. Waycross provided access to coastal Brunswick and Atlanta was accessed by both Augusta and Macon. Branch lines tied together Athens, Columbus, Albany, and Dalton in the northwest corner of Georgia.

With the advent of industrialization Georgia's economic base began to diversify. Textile mills, tanneries, lumber mills, and turpentine distilleries became established throughout the state.

In 1850, Liberty County had a population of 2,020 whites and 5,908 black slaves. The population, however, had increased by only 9½% from 1840. There were 244 farms, incorporating 38,563 improved acres and 303,518 unimproved acres, for an average farm with 158 acres of improved land and the average farm was valued at $3,317. The county boasted 1,100 horses, 15,450 mules, 4,609 sheep, and 10,006 swine. Agricultural products included 2,116 bushels of wheat, 21,432 bushels of rye and oats, 297,614 bushels of corn, 72,318 bushels of Irish potatoes, 26,470 bushels of peas and beans, 40,225 pounds of butter, 24 hogsheads of cane, 11,640 gallons of molasses, 1,892,462 pounds of rice, 1,883 bales of ginned cotton, and 8,865 pounds of wool. The 1850 census reported that slaughtered animals were valued at $28,557. These figures, however, are misleading, since they lump together the large, wealthy rice plantations (which gave "Riceboro" in southern Liberty County its name) with the smaller, subsistence farms which bounded Taylors Creek and its drainages. For example, deeper in the "Pine Barrens," Tatnall County had a population of 2378 whites and only 831 black slaves. The county's 327 farms included only 14,244 acres of improved land, for an average of 43.6 acres per tract. These farms produced only 47,800 pounds of rice and 321 bales of cotton (DeBow 1854:210-217).

Turning to the Liberty County's industrial development, the county contained only $4,950 of invested capital and only 24 hands were employed. The annual product was estimated at slightly over $7,000. Although unknown, it is assumed that a portion of this invested capital was in the from of copper stills, acquired from the Scotch liquor industry, for the distillation of turpentine. Employment figures would not be reflected in these figures, for by the 1840s and 1850s it became common for slave labor to be used in the cutting of trees and the collection of gum (Thomas 1975:3-4).

The Civil War

The advent of the Civil War and its after effects would haunt the state of Georgia for years.

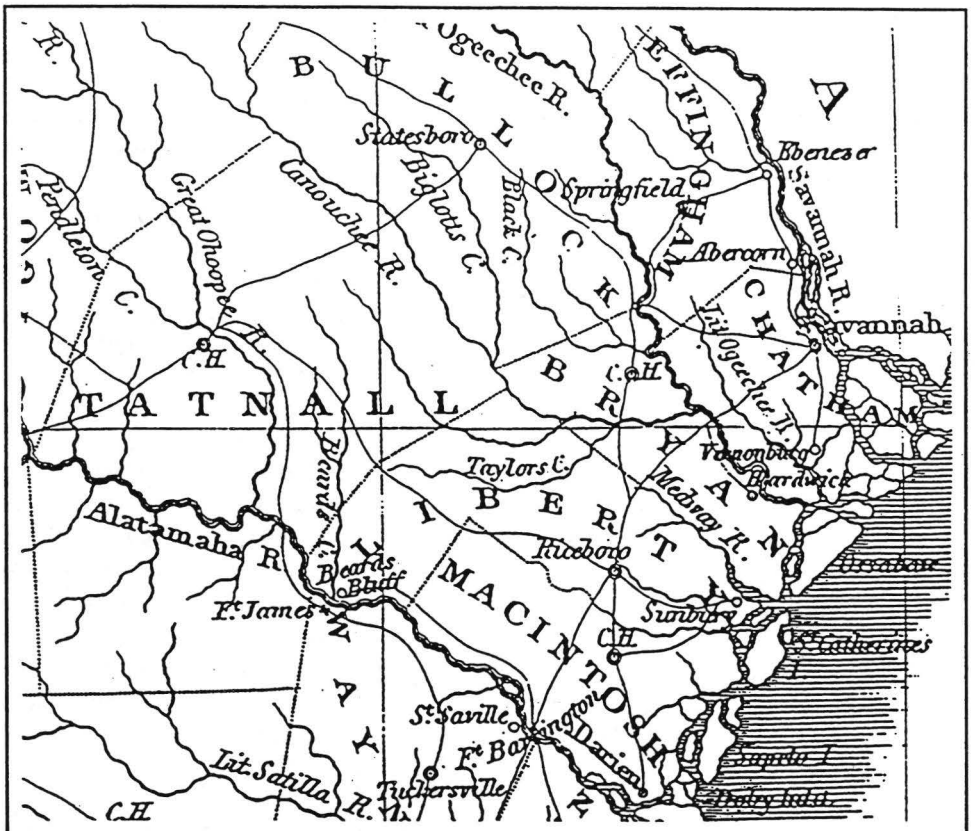


Figure 15. A portion of Finley's 1824 *Georgia* showing the project area.

Seceding from the Union on January 19, 1861, Georgia followed South Carolina, Mississippi, Florida, and Alabama into the folds of the confederacy. Georgia, especially, had taken the hard road and "soon found itself in a war from which it would not recover for decades" (DePratter and Howard 1980:46). Georgia's Alexander Stephens became Vice President of the new Confederacy and Robert Toombs was made Secretary of State.

The war began easily for Georgia. In January 1861 a band of Georgia volunteers sailed down the Savannah River to capture Fort Pulaski. At the same time Atlanta began to increase in importance. In the 1850s the town was described as a "sorry-looking place, always associated in my mind with rain and super abundance of red-clay mud" (quoted in Lane 1993b:x). The population increased from about 2,500 in 1847 to over 11,000 in 1860 to more than 16,000 before the war's end. The Confederates also easily seized the Union arsenal at Augusta and the mint at Dahlonega (DePratter and Howard 1980:46). Additional arsenals were established in Atlanta, Savannah, Macon, August, and Columbus. The state penitentiary at Milledgeville was converted into a rifle factory and the Athens Foundry became a cannon factory.

These gains were quickly offset by the Union blockade along the coast in late 1861 and the fall of Georgia's coastal island fortifications in March of 1862. Fort Pulaski on Cockspur Island was retaken by Federal troops in April of that year (for a review of the historical documents associated with this event, see Anderson 1995). The loss of Fort Pulaski effectively closed the port of Savannah to all those but the hardiest blockade runner. Cut off from the sea, new batteries were thrown up around the cities and paving stones were ripped up from the streets to serve as ballast to sink obstructions in the river.

Other coastal engagements included minor battles at Whitemarsh Island in April of 1862 and Fort McAllister in March of 1863 (Lane 1993b:xi). Additional Union incursions occurred in June 1863 when the bridge over the Turtle River near Brunswick was destroyed and in July when the coastal town of Darien was burned.

Except for Fort McAllister on the Ogeechee River, all of coastal Georgia was under Federal control. It wasn't, however, until early 1864

when Confederate troops began to build obstructions *above* Savannah that the city's citizens began to realize both that they were being abandoned and also that the war was lost.

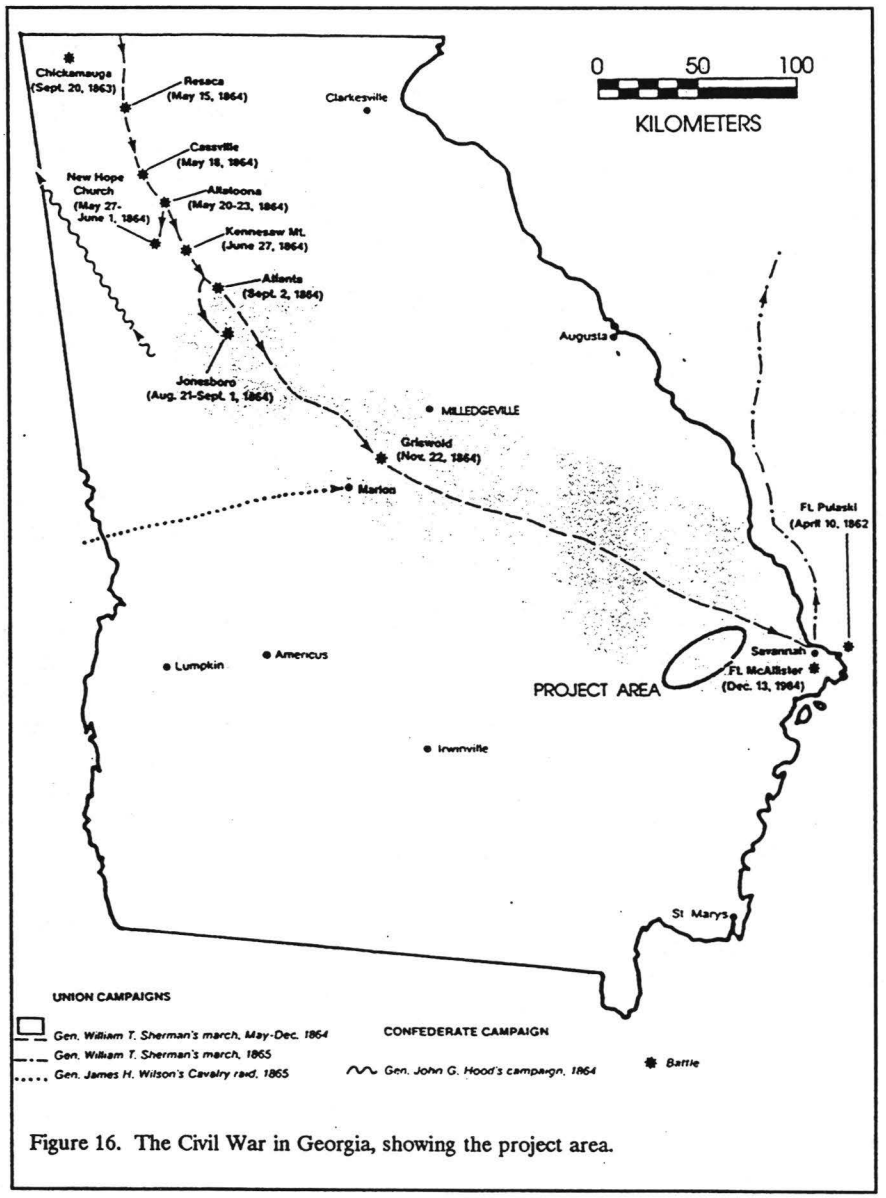


Figure 16. The Civil War in Georgia, showing the project area.

In May 1864 the interior of Georgia felt the full brunt of the war (Lane 1993b:xi). That Spring, General Sherman left Chattanooga and began his long fight to the sea with an army of 100,000 Union troops (Figure 16). Following the route of Western and Atlantic Railroad, Sherman faced Confederate forces of about 41,000 troops commanded by General Joseph E. Johnston and later by General John B. Hood. While initially stymied, Sherman managed to outflank the Confederate positions, forcing them into Atlanta's trenches. After forty days of bombardment, part of the Union forces swung south of the city, threatening Confederate supply lines to Macon. At that point, on September 1, Hood evacuated Atlanta. From May to September, 4,988 Union soldiers and 3,044 Confederates were killed in Georgia. Those hospitalized from malaria, typhoid fever, diarrhea, dysentery, measles, and other diseases accounted for an additional 46,000 Confederate troops and nearly 63,000 Union soldiers.

After taking Atlanta in September 1864, Sherman's route to Savannah lay open. He wrote his wife, "We have devoured the land. All the people retire before us and desolation is behind. To realize what war is one should follow our tracks" (Lane 1993b:xiv). By November 16th, Sherman was done with Atlanta and had to decide whether he would retreat to Tennessee or continue his march to Savannah. By taking Savannah, Sherman would be able to create a new base on the Atlantic coast which would decrease the length of his supply line (Nevins 1971:158). This would assist him in his move north to harass Lee's rear lines south of Petersburg. It was also Sherman's intent to live off the land and by doing so, destroy as much food, munitions, and infrastructure as he could, thus eliminating the threat posed by Johnson and Hood's wide ranging

armies.

Sherman left Atlanta with 60,000 infantry and 5,500 cavalry. He would lose less than 850 men during his operations within central Georgia and the capture of Savannah (Nevins 1971:158). His troops covered an area approximately 96 km wide and 400 km long throughout the Georgia countryside (Nevins 1971:158). "Sherman's line of march followed the Georgia Central Railroad, covering a wide belt on either side, and east, of Milledgeville. Brigadier-General Judson Kilpatrick led a cavalry which struck toward Macon, fell back to Gordon and rejoined Sherman at Milledgeville (Lane 1993b:xvii).

By November 22 Sherman's army had captured the state capital in Milledgeville and had crossed the Ogeechee by the end of November (Figure 17). One account, of Mary Jones of Liberty County, expressed the anguish of local residents:

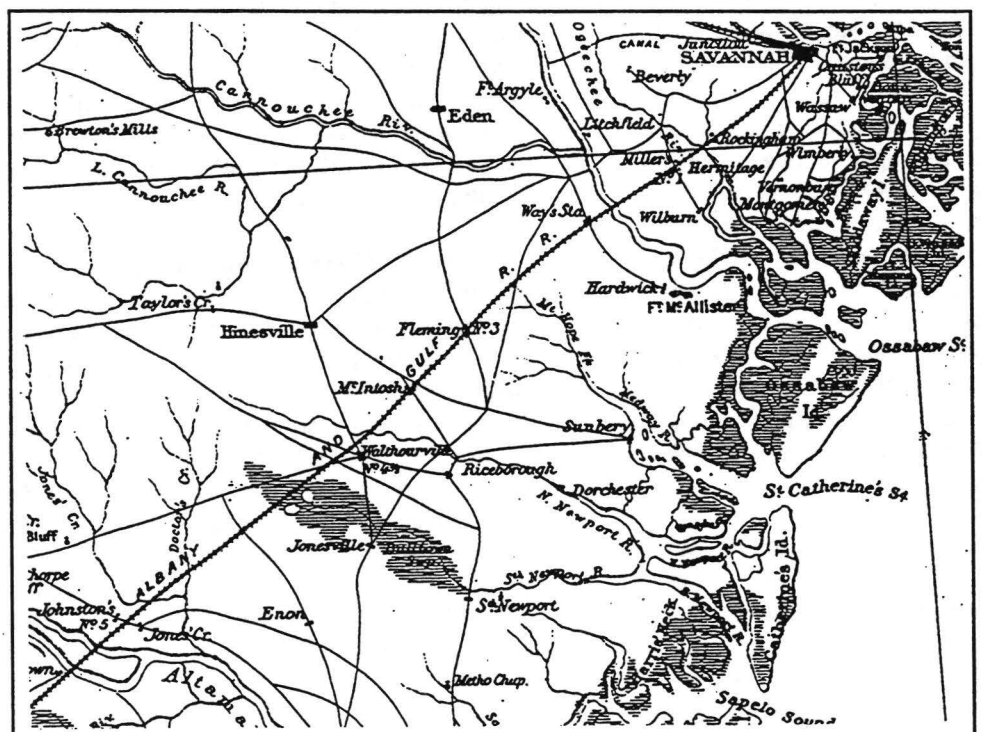


Figure 17. The project vicinity in 1865 (adapted from *Atlas to Accompany the Official Records of the Union and Confederate Armies*, Plate CXLIV.

Clouds and darkness are around us. The hand of the Almighty is laid in sore judgement upon us. We are a desolated & smitten people (Lane 1993b:220).

Sherman faced little resistance and finally captured Savannah from the west on December 21, one day after the city was abandoned by the Confederacy.

The damage done by Sherman's armies to Georgia's agriculture and industrial infrastructure in thirty-four short days would take decades to overcome. Sherman estimated the damage to the state during his campaign as "fully $100,000,000.00 one fifth of which had been of use to [the] army, and the rest shear waste and destruction" (Guernsey and Alden 1977:690-691 [1866]; Nevins 1970;159). Between Howard's right wing and Slocum's left wing, the Union army, during the campaign from Atlanta to Savannah, set free over 3,000 African American slaves, confiscated over 26,500 head of cattle, 6,171 horses and mules, 10.5 million pounds of grain and

Louisville . . . between the Ogeechee and Savannah Rivers" (Guernsey and Alden 1977:686 [1866]). Sherman's right wing:

> commanded by Major-General Oliver Howard, moved through Jonesboro, Monticello, Gordon, [and] Irwinton. The left wing under Major-General H.W. Slocum headed to Covington, Madison, Eatonton, [and]

corn, 10.5 million pounds of fodder, over 43,000 bales of cotton, and destroyed over 310 miles of railroad to where "scarcely a tie or rail, a bridge or culvert," remained in central Georgia (Guernsey and Alden 1977:692 [1866]; Nevins 1971:159). Various support industries were also destroyed. These included "machine shops, turn-tables, depots, water-tanks, cotton gins and presses" (Guernsey and Alden 1977:692 [1866]). Brigadier-General Kilpatrick's operations would add 14,000 bales of cotton, 12,900 bushels of corn and 160,000 pounds of fodder to Howard's and Slocum's totals.

By April of 1865 the war would be over but, because of Sherman's army and its destruction, life, as it had been known to the residents of central and coastal Georgia, ended in December 1864. Sherman's march through Georgia, however, had other affects on history. As Sherman marched through Georgia, many slaves deserted their plantations and sought refuge with the Union forces. In what may have been a wise military decision, Sherman made a very poor political judgement, turning most of these freedmen away. Large numbers were re-enslaved by the remnants of the Confederate Army — creating a major political scandal for President Lincoln (Friedheim and Jackson 1996:132).

Lincoln dispatched Secretary of War Edwin Stanton to Georgia to investigate the situation. After meetings with a number of African-American ministers in Savannah, Sherman issued his famous Field Order Number 15, which set aside almost a half-million acres of captured Confederate land, dividing it into small plots for freed slaves. Although this approach satisfied the needs of the immediate political situation, as Willie Lee Rose discusses at length, the North would eventually turn their back on Southern blacks and relatively little of this acreage would actually be distributed (Rose 1964:328ff).

The combined force of Sherman, coupled with the increasing number of freed blacks and the use of black troops by the North, resulted in the call by Jefferson Davis, president of the Confederacy, for the recruitment of slaves into the Confederate Army, offering them both pay and freedom. This proposal was passed by the Confederate Congress in early 1865. As Friedheim and Jackson note, "the fact that the South was freeing African Americans in order to save the Confederacy was one last bit of dramatic evidence that its war to preserve slavery was all but lost" (Friedheim and Jackson 1996:133).

Reconstruction

The postbellum period within Georgia was difficult for the state and its residents. Economic recovery from a devastated industrial and agronomic base, as well as inter-related transportation systems, would affect Georgia's recovery until the 1890s. The problem was compounded by nationwide depressions that lasted from 1873 to 1878 (DePratter and Howard 1980:46).

While Sherman left Georgia in January 1865, it was June of that year before Federal authority was extended from Macon and Savannah throughout the rest of the state. In May 1865 President Andrew Johnson proclaimed James Johnson, a lawyer from Columbus, the provisional governor of Georgia. A convention of "loyal" Georgians repealed the secession ordinance, abolished slavery, and repudiated the Confederate debt in October 1865. A new governor, Charles Jenkins, was elected and the new legislature ratified the Thirteenth Amendment and passed additional laws to guarantee the liberty of the freedmen.

Congress, however, reacted angrily to Southern excesses and passed a military reconstruction act in March 1867. Georgia's new government was abolished and the state returned to military rule. State government was again reorganized, only this time there were even more blacks and fewer whites in the legislature.

In April 1868 Rufus Bullock was elected governor and in July a new legislature ratified the Fourteenth Amendment. The state capital was moved from Milledgeville to Atlanta. But by December 1869 Congress once again became outraged by the excesses of the Ku Klux Klan and re-established military rule, again "re-organizing"

the state government. Under this third government, the Fifteenth Amendment was ratified and Georgia was finally readmitted to the United States in July 1870.

Economic and Political Reorganization

While the political future of Georgia was in upheaval, an effort was made to restore some degree of the state's agricultural prosperity. Freedmen often returned to the plantations to work under white bosses rather than white owners, and were still tied to a task system. Owning no land, freedmen and landless whites formed the nucleus of a relatively new labor system of tenancy. This new labor system grew dramatically, rising from about 53% in 1890 to over 65% in 1910 and peaking at about 68% in 1930 (Coleman 1991:259). The number of farm units increased from 224,00 in 1900 to 310, 132 in 1920, with the average size of the farm unit dropping from 117 acres to only 82 acres. While there were a variety of systems, tenants usually paid either a cash rental or became sharecroppers who divided their crop with the landlord in return for the ability to work a portion of the plantation. Interestingly, not only did the proportion of black farmers in the flat pine lands decrease substantially between 1899 and 1910 so did the rate of tenancy. Although the rate of tenancy was double that for blacks than whites (24% as compared to 41.9%), statistically the flat pine lands held the lowest number of white tenant farmers and other than the flat pine lands, only the lower coastal plain contained fewer black tenants than any other portion of the state (Harper 1922:329, 332, 358).

Cotton continued to be the major focus of agricultural efforts — offering white land owners with their only hope for economic revival. Just as "King Cotton" drove the South to the Civil War, it served to nearly ruin any chance the South had to revitalize itself after the war. Although over half of the total value of Georgia's agricultural production was wrapped up in this one product in the pine lands only corn production (by 30%) exceeded the values of cotton (Harper 1922:341).[3] The overall dependence on cotton was the result of a number of different factors. Kenneth Coleman, for example, notes that force of habit keep many farmers growing cotton — they simply didn't know any other crop. Many, he observes, didn't have either the education or financial resources to diversify (Coleman 1991:257). Of equal importance was that with small, and concentrated urban populations, markets for fresh produce were limited. This, coupled with the very poor transportation network crippled efforts to engage in truck farming until the Second World War. Even as late as 1930 only 6% of Georgia's farmers lived near paved roads.

The reliance on cotton, combined with the debilitating effects of the Civil War, created an intricate web of dependency was created between tenants, land owners, and merchants. After the Civil War the crop lien system emerged as the only viable source of short-term credit. By the 1890s the system had expanded to the point to trapping between 80 and 90% of Georgia's farmers. In order to obtain credit for planting, or sometimes for even living, a farmer obtained a lien on his ungrown crop from the furnishing merchant. These merchants, themselves living on very little hard cash, undertook to finance what were often risky farming efforts. Consequently they typically charged from 25% to as much as 75% interest on their loans under the crop lien system.

From the standpoint of corruption, Republican rule during Reconstruction was likely no better, or worse, than Democratic rule either before or afterwards. In Georgia, for example, a white Reconstruction official pushed the state's newly formed public school system to purchase books published by the New York Harper Brothers firm, in exchange for a $30,000 "loan" (Friedheim and Jackson 1996:234). While the same types of fraud were seen, regardless of political affiliation,

[3]As stated by Harper (1922) it should be noted that "acreage and yield fluctuate from year to year, and the census year may have been abnormal in one way or another, so that figures should not be taken too literally" (Harper 1922:341).

even the hint of corruption played into the hands of those opposing Reconstruction.

Although the freedmen did exercise their voting rights in 1867 and 1868, they never dominated the Georgia political scene during Reconstruction. Threats of violence by the Ku Klux Klan eliminated any real black influence and by December 1870 the Democrats won overwhelming control of the state legislature. By 1873 this white legislature effectively eliminated virtually all of the advances made by the black electorate by extending residency requirements for state and county elections.

The 1870s and 1880s were a period of economic revitalization, energy, and optimism, for rural Georgia. Although the overall economic situation changed little, if at all, major changes did occur in the manufacture of naval stores, particularly in the turpentine industry. Since the late Colonial Period North Carolina had led the nation in the production of naval stores. This was particularly true of the turpentine industry. Yet, by the late nineteenth century a history of poor planning had led to a decline in production within that state (Thomas 1975:4).

> After 1875, it was to Georgia that many North Carolina turpentine farmers moved to "set up shop" in Georgia's great pine belt, south of the fall line. Most of these North Carolina farmers brought black workers with them and returned each year to obtain more workers from the Carolinas. The farmers built villages or quarters for them on the sites since they had no other place to live (Thomas 1975:4-5).

From 1880 to 1905 Georgia led in the production of naval stores. Florida took the lead until 1923 when Georgia regained its position in the naval stores industry. Yet, it should be noted that while many of the state boasters forecasted a "New South" of reconciliation and reform, much of the state remained locked in poverty and bigotry nurtured by years of slavery. In 1882, Oscar Wilde wrote from Augusta:

> I write to you from the beautiful, passionate, ruined South, the land of magnolias and music, roses and romance, picturesque, too, in her failure to keep pace with your keen Northern pushing intellect, living chiefly on credit and on the memory of crushing defeats (quoted in Lane 1993a:xii-xiii).

In spite of the improvements seen in the urban areas, Georgia remained rural and poor. In 1900, 85% of the state's population still lived on farms or in small villages and 60% continued to work in agriculture. Further, the state's per capita income showed no increase between 1880 and 1900 (Lane 1993a:xiii).

Cotton production on late nineteenth century tenant farms was little different from that practiced on antebellum plantations. The planting, cultivation, and picking was labor intensive, with the entire family, and often a mule, devoting their entire energies to this single minded pursuit. Yields were low and debt continued to be heavy.

Lane (1993a:xiv) points out that debts which could be repaid by a single bale of cotton in 1880 required two bales only five years later in 1885. A major financial panic hit the country in 1893, followed by a nearly seven year depression. Cotton prices plunged to less than 5¢ a pound and it wasn't until 1898 that the recovery drove prices up to 7½¢ a pound. These hard times forced furnishing merchants to severely restrict lending, even based on crop liens. This caused some crop diversification, but little lasting improvement.

Cotton prices did not increase significantly until the early twentieth century, when there was a twenty year period of relative prosperity. Farmers turned their backs on diversification and returned to "King Cotton." The 3.5 million acres planted in cotton in 1900 were increased to over 5 million acres in 1916. It was also at this time that the turpentine industry gained new impetus for its production. This came in the form of Dr. Charles

Holmes Herty:

> Herty, a chemist at the University of Georgia, was on a sabbatical to Europe when he heard a German professor relate how the Americans "butchered the pine trees by cutting a box into the tree to collect the resin and sometimes ruined the future growth of the tree. Herty was also able to see cups, a new invention, being used to collect gum at this time. Herty returned to Georgia late in the summer of 1900 and started his crusade to better the turpentine industry with an initial visit to Valdosta in October of that year (Thomas 1975:5),

Eventually, he invented the clay, or Herty, cup to "replace the box method of collecting gum" (Thomas 1975:6). It was only after the introduction of the "Herty cup" that Georgia was able to retain the lead in turpentine production.

Immediately before the First World War, Georgians in general had greater prosperity than they had seen since before the Civil War. The expansion of Rural Free Delivery and the increase in automobiles and telephones contributed to this appearance of prosperity and well-being (Coleman 1991:261).

The introduction of the boll weevil between 1915 and 1917 (Hodler and Schretter 1986:86), coupled with increasing competition further north and even outside the United States, sent prices plummeting. Cotton prices dropped from 35¢ a pound to 17¢ in a single season. Cotton yields fell by a third to nearly a half (Coleman 1991:263).

In spite of the spread of tenancy, Bryan, Liberty, and Long counties continued to have low

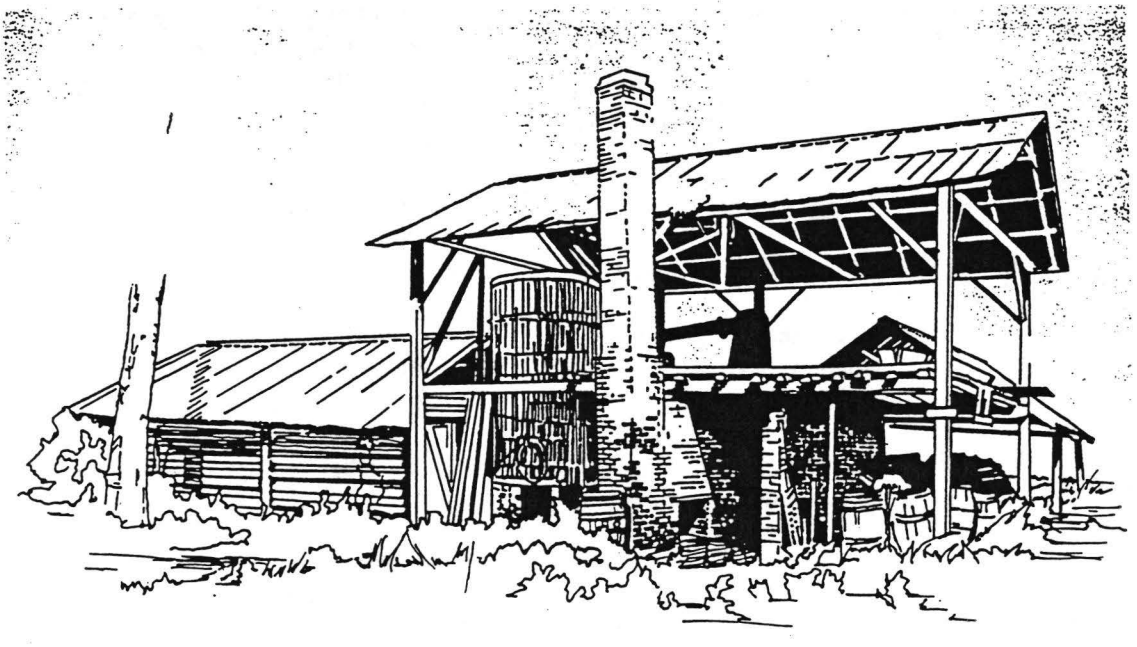


Figure 18. Typical twentieth century turpentine still (Thomas 1975:cover).

tenancy rates. For example, in 1930, at the height of tenancy, these counties all had less than 35% tenancy, while counties just slightly further inland had ranges up to 80% (Hodler and Schretter 1986:86). The project area continued to be dominated by small, privately owned farms.

What industrial improvement the state saw focused on very basic extractive industries — cotton, lumber, and paper mills — which plundered the natural environment and paid very low wages. One enterprise in particular — cotton mills — was Georgia's leading industry throughout the half-century from 1890 to 1940. In Liberty County, by 1900, agriculture, livestock, lumber, and naval stores were the primary industries. In this year the county produced about 333 bales of cotton, 2,000 head of cattle and hogs, 2,000 feet of lumber, and approximately 1,000 barrels of resin and turpentine (Groover 1987:70).

In western Liberty County large tracts of property were purchased by turpentine distillery companies. The Lanier Turpentine Corporation owned a number of tracts in the project area. As well, a number of privately owned stills were constructed through out the area. A large still was owned and operated by Mr. Porter of Taylors Creek (Trinkley et al., 1996) as was one owned and operated by Joseph B. Way in Hinesville (Groover 1987:81). As of 1901 Liberty County contained a total of 12 distilleries (Thomas 1975:E-1).

Trade unions were virtually unheard of prior to about 1890. During the first half of the twentieth century most union activity focused on skilled trades. Textile workers used strikes on several occasions in an effort to organize. The most notable occurred across the state during the summer of 1934. Eventually the state militia was called in to break the strike and union organization in the mills would not be successful for another two decades.

The railroads, one of the few truly successful industries in Georgia, had expanded dramatically by 1899. Much of this expansion was in central and northern Georgia. The main line connected Savannah with McIntosh, Walthour, Johnson, and Jesup on the southern edge of the project area, where lines then extended north, south, and west (Hodler and Schretter 1986:171). The bulk of the Pine Barrens wouldn't be readily accessible until at least 1939 (Hodler and Schretter 1986:172). In Liberty County several railroads were constructed to access various portions of the county. The majority of these were "convenient to farmers, naval stores operators, and sawmills except in the upper part of the county" (Groover 1987:80). These would include the Darian and Western Railroad to the south and the Glennville and Register Railroad to the west. The Georgia, Coast and Piedmont was established in 1902. A fourth railroad, the Flemington, Hinesville and Western ceased operation in 1919 (Groover 1987:70, 80). By 1919 there were six freight stations located in the county. The Savannah and Southern Railroad constituted the southern border of survey tract "B".

Much like the orientation of small towns and communities along river and road locations during the eighteenth and nineteenth centuries (Barr 1996, Trinkley et al. 1996), a number of small communities grew up along the railroads. Although some of these communities still exist, for example Johnstons Station became Ludowici, a number failed to remain viable through the twentieth century. Many of these Liberty County communities had names like Mendes, Wee Fanny, Goosepond, Donald, and Shady Grove (Groover 1987:70). Many contained schools for the education of both blacks and whites. In 1919 the county contained 98 public elementary schools and a one public high school. A number of privately operated schools supplemented the public system (Groover 1987:83).

The Rise of Populism and Segregation

The Democrat Party, popular with Atlanta businessmen, dominated Georgia's recovery. Farmers, unhappy with the shift toward "big business" and the urban economy, were easily defeated by Democratic appeals for unity against the threat of black domination, at least during the 1880s. By the 1890s, however, the power of the rural communities was increasing. In 1890 the Farmers Alliance unseated conservative Democrats

in six of the 10 Congressional Districts, took control of the party, and easily won both the governorship and the legislature (Lane 1993a:xv).

Faint with power, these populists bolted from the Democratic party and began an appeal to the common interests of all farmers — black and white alike. Urging economic reform and appealing to the discontent of both poor blacks and whites, the leader of this movement, Tom Watson, drove the conservative Democrats to outlandish displays of election fraud. Blacks (and whites) were provided free liquor and barbecue, then driven to polling places. Using the tactic of voting early and voting often, the Democrats won landslide victories against the populists — garnering more votes in some precincts then there were registered voters.

The Democratic response to Tom Watson was borne of fear. Black illiteracy had dropped from 92.1% in 1870 to 52.4% in 1900. By the early 1900s blacks owned 1,400,000 acres of property valued at over $28,000,000. Simply put, in a single generation freed slaves had managed to increase their land holdings by a million acres and reduce their rate of illiteracy by half. The white population, still yearning for a world of "darkies" who knew their place, viewed this kind of progress with alarm. Lane recounts one Georgian who put the view of the white population very plainly:

> As long as a Negro keeps his place I like him well enough. As a race, they are vastly inferior to whites and deserve pity. This pity I am willing to extend as long as they remain Negroes, but the moment a nigger tries to become a white man, I hate him like hell (quoted in Lane 1993a:xvii).

As the agrarian empire of Georgia began to collapse, and white and black people began to move into the cities, crossing traditional and accepted lines of behavior, segregation sprang up almost overnight. Georgia's first statewide segregation law was passed in 1891, with additional laws enacted in 1897, 1905, and 1908. Cities also began to pass municipal ordinances against blacks (for an overview, see Kennedy 1990).

As the economic conditions of the state worsened there was a dramatic outbreak of lynchings, which Lane suggests reflected the "poverty and frustrations" brought on by the collapse of cotton and the failure of populist reforms (Lane 1993a:xix). Between 1889 and 1918 Georgians lynched at least 386 people — more than any other state — and 93% were blacks.

The white populists, believing that it would be necessary to shackle blacks in order to achieve their own economic freedom, engaged in one of the dirtiest campaigns ever seen in Georgia. In the aftermath of vitriolic oratory, Atlanta exploded in a four-day race riot. The new governor of Georgia, Hoke Smith, pushed through a constitutional amendment to disenfranchise the black in 1908, making Georgia the seventh Southern state to do so. As Lane observes, "a half century after emancipation, Georgians had put the black back 'in his place'" (Lane 1993a:xx; see also Ayres 1995 and Du Bois 1992).

At first slowly, and then in very large numbers before and after the First World War, blacks engaged in the "Great Migration," moving out of the South. There was a shift from south to north, rural to urban, and from agricultural to industrial.

World War I stimulated some diversification of crops, but had few other economic impacts. It certainly did not solve any of Georgia's economic or social ills. Following the war, a series of economic crises struck. Cotton prices continued to fall, the boll weevil continued to advance, and cotton was taken out of production. The state's farm population declined by 375,000. Finally, as if to seal the fate of Georgia, the Great Depression hit in 1929.

The Depression and the Modern Era

The New Deal agricultural policies of the 1930s to some degree helped large farms, but small farmers and especially tenants continued to suffer. Farms were abandoned as the migration to the

cities continued.

One of more successful programs for Georgians was the establishment of the Federal Land Bank system, which served to undermine the crop lien system by providing affordable credit (Coleman 1991:265). Another major change in the lives of the ordinary Georgia farmer was the creation of the Rural Electrification Administration in 1937. Prior to this 97% of the state's farmers lacked electrical service. By 1950 forty-three cooperatives had been created and most of the farms in Georgia were electrified.

While causing much hardship on tenants and sharecroppers, the Depression and the associated government programs also served to break "King Cotton's" monopoly. Tobacco, which was already the state's second most important crop by 1927, doubled in acreage by 1939. The 1930s also saw Georgia assume in lead in national peanut production. Pecan production increased and there was also a steady increase in the commercial production of tomatoes, beans, cabbage, cantaloupes, and other truck crops.

It was World War II, as much as any New Deal program, which drug America, and Georgia, out of the Depression. Military bases pumped federal dollars into the state and war production expenditures encouraged even further economic development (Coleman 1991:339). Per capita income would jump from about $350 in 1940 to more than $1,000 in 1950. Most of this growth was directly attributable to the rapid growth of industry and manufacturing.

Fort Stewart, created in June 1940 with the purchase of 2025 ha, was initially called Camp Stewart and was intended to serve primarily as a training facility for National Guard units being inducted into the regular army (Campbell et al. 1996:150-151). The acreage was quickly expanded, so by 1941 the base incorporated 60,750 ha. This appears to have displaced upwards of 6,000 people and 1,500 families (Campbell et al. 1996:151).

During the early years of World War II the base was used primarily for anti-aircraft training. By late 1944 its function shifted to general troop training and by 1945 the focus was on training cooks and postal workers. In July 1946 Camp Stewart, as it was called, was deactivated. With only a skeleton force of military and civilian personnel stationed there, the base fell into disrepair and was used primarily as a National Guard summer camp (Campbell et al. 1996:153).

In 1953 the base's function shifted to include the training of tank units, although National Guard units continued to use the camp during the summer. Peaks in activity occurred during the 1961 Berlin Airlift and the 1962 Cuban missile crisis. During the Vietnam Conflict the base was used by the Aviation School Element and became a U.S. Army Flight Training Center.

After Vietnam the base came close to closing, but was eventually saved by the decision to organize an infantry brigade and division. Campbell et al. (1996) note that the First Brigade, 24th Infantry Division became the first unit of this reorganization to use the Fort Stewart facilities (Campbell et al. 1996:153).

RESEARCH STRATEGY AND METHODS

Research Goals

The primary goals of this survey were to identify, record, and assess the significance of archaeological sites within the 809 ha survey tract "A" and the 804 ha survey tract "B" of the Brigade Maneuver area of southwest Fort Stewart. As stated earlier, this work is being done in order to fulfill compliance with the National Historic Preservation Act (Public Law 89-665, as amended by Public Law 96-515) Guidelines for Federal Agency Responsibilities, under Section 110 of the National Historic Preservation Act, Army Regulation AR 420-40, and 36CFR800 (Protection of Historic and Cultural Properties).

Preservation efforts offer important economic, tourism, and education opportunities (see, for example, Rypkema 1990). Yet, clearly these are of little consequence to a government agency whose mission statement is national defense. Clearly, in such a case, the motivation is compliance with law. In spite of this, preservation offers intangible benefits, such as external benefits to society, which are worthy of careful consideration. U.S. Representative John Lewis from Georgia has remarked that, "it is not enough to learn from history or a movie, we must make sure that these precious pieces of our history are preserved." Knowing and understanding our past, many have argued, creates better citizens and hence a better society.[1] Citizens take greater pride in their city's, county's, and country's historical achievements. This pride naturally boosts morale and enhances civic participation. Native American and African American groups can rightly take pride in the expression of their unique ways of life, their history, and their contribution to our Nation. Exploration of our past reveals the heights of which humanity is capable. The study supplies continual inspiration and promise. The exploration of the past makes it possible to keep on seeing, thinking, and reflecting afresh — and this freshness and willingness to explore the past is essential to the democratic process. Exploration of the past may offer social commentary by providing new insights into past lives, or how society reacted to past pressures. It may even help us to better understand the failures of past.

It is also important that a country which has so strongly advocated educational improvement and reform should also understand the irreplaceable role that historic and prehistoric resources can play in teaching us about our heritage. It is essential that the next generation of citizens understand the stories hidden within our archaeological sites and in our historic churches, houses, factories, and communities. The ability to reach out and touch the past, forming a strong and clear link between yesterday and today, offers an unforgettable understanding of another way of life and helps our children better understand the fabric of life in our country. By exploring and emphasizing African American and Native American history it is possible to strengthen the understanding that our heritage is the combined history and culture of all of our citizens.

Oftentimes historic preservation, through the exploration of the past, may challenge rather than reassure, and provoke rather than sooth. Archaeological research, in many ways, offers much more than history ever can since history is largely written by the well educated, the wealthy, and the white. History tends to ignore the poor, the underclass, the illiterate, making them invisible people. History is what others want us to know, archaeology offers the opportunity to explore the reality of the past without the filter of subjectivity

[1] One of the earliest discussions of preservation for patriotic reasons is Charles B. Hosmer, Jr.'s *Presence of the Past*, a history of preservation in America up to 1926. He reveals that long before even the Civil War, America's need to create a national identity manifested itself in efforts to preserve historic sites.

added by some, perhaps many, historical accounts. Archaeology offers the potential to explore the lives of African American slaves that are largely known only through the dry history of white slave-owner account books and plantation diaries. While slave owners were concerned with how many acres a slave could hoe, or how much they had to be fed, the owner was rarely interested in how slaves lived, died, ate, or made their house a home. Likewise, our understanding of Native American groups in the historic period is dominated by traders and occasional visitors who had clear reasons for coloring their accounts. Archaeology offers the only opportunity for better understanding the reality of the past.

Part of this reality is also the understanding that history is not made up of single events, or great people, or unique ideas alone. As Tony Wrenn and Elizabeth Mulloy explained nearly two decades ago:

> Events are only punctuation marks; the process itself is history. It takes days and days of irritation and heat and insult, and grievance to provoke a revolution. A bicentennial commemorates 200 years — not just the years on either side of a hyphen (Wrenn and Mulloy 1976:15).

History is fluid and on-going. It involves both the great and the small. Archaeological studies help us better understand both the continuum and also the importance of the common person.

Many also point out that historic preservation is a "merit good" — simply because preservation is an important part of life, its perpetuation and dissemination merits government support. Like food, shelter, and education, some feel that everyone should be entitled to a minimum quantity and standard of historic preservation experience, whether that be exposure to historically significant buildings, a better understanding of past industrial technology, or the ability to explore Native Americans who lived thousands of years ago. The government allows preservation efforts to be available and emphasizes their importance by support of preservation on government facilities and land. Inherent in this is the assumption that, without subsidy, the cost of historic preservation is too high relative to most consumer's incomes. It follows that there is an intrinsic wrong in making our history available to only the richest 20% of the population, who are likely to represent a very biased cross-section of our society.

In addition to the legally mandated goals of this study, in an effort to expand the base of our socio-cultural knowledge, we identified and incorporated a range of secondary goals. These reflect an effort to address at least some of the issues identified as important to the discipline. These included both research issues, whose answers will help to better explore and refine our understanding of the past, and methodological issues, whose answers will help to better and more cost-effectively undertake survey and preservation efforts.

The survey of the JAECK Drop Zone and the Taylors Creek area offers a unique opportunity to intensively explore the archaeology of a section of Georgia which has received relatively little in-depth archaeological attention. It was found that both survey areas contained prehistoric and historic sites. The JAECK Drop Zone contained small prehistoric hunting camps as well as historic dispersed settlements. The Taylors Creek area contained evidence of prehistoric occupation, as well as historic dispersed settlements along with a small community, Taylors Creek.

The combination of evidence recovered from these surveys offer an opportunity to study a number of diverse topics concerning the prehistoric, colonial and modern era. Each of the sites discovered represents some form of human occupation. This may range from a prehistoric hunting camp or seasonal occupation to a contact period frontier settlement, to a mid-twentieth century rural settlement. The study of recovered archaeological data provides a time frame for these sites, thus the temporal duration of these settlements. The functional purpose of these sites may become apparent from the study of tool

assemblages or from personal items. They also offer the chance to determine changes in land use patterns over an extended period of time.

This survey has also allowed the critical study of archaeological methodology. Questions related to the effectiveness of 30 m transects in the discovery of prehistoric and historic sites may be addressed. Would other methodologies be more effective in locating prehistoric sites as opposed to historic sites? Should a different methodology be used when attempting to determine patterns and loci of dispersed settlement as opposed to communal settlement? Each of these questions addresses concerns related to surveying singular geographical areas in which multiple habitation components are evident. Although some of these topics are addressed within this report, many of them will need careful consideration and more data to make determinations.

No major analytical hypotheses were created prior to the field work and data analysis, although certain expectations regarding the secondary goals will be outlined in these discussions. The research design proposed for this study is, as discussed by Goodyear et al. (1979:2), fundamentally explorative and explicative.

As stated above, the primary goals of this survey were to identify, record, and assess the significance of archaeological sites within the survey tract. The latter aspect involves the sites' eligibility for inclusion on the National Register of Historic Places, although Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead compliance agency, the United States Army, in consultation with the State Historic Preservation Officer at the Georgia State Historic Preservation Division.

The criteria for eligibility for the National Register of Historic Places is described by 36CFR60.4 and states that:

> [t]he quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

It is generally accepted that "the significance of an archaeological site is based on the potential of the site to contribute to the scientific or humanistic understanding of the past" (Bense et al. 1986:60). Butler suggests that the only valid measurement of significance must be based on what he calls the "theoretical and substantive knowledge of the discipline" at any particular moment in time (Butler 1987:821). While the use of this approach over that developed by Glassow[2]

[2] Glassow's (1977) approach to evaluating site eligibility is through the use of five properties: site integrity, site clarity, artifactual variety, artifactual quantity, and site environmental context. These qualities stress properties of the archaeological record. *Integrity* refers to the degree of preservation or amount of in situ remains present at a site. It relates to the condition and amount of archaeological artifacts, ecofacts, and features found at a site. *Clarity* indicates how well the strata or

(1977) has been suggested, Butler himself acknowledges, "we cannot foresee future research questions, and we may not possess the theory to interpret and understand all that is present" (Butler 1987:822). At this point in time it seems essential to recognize the importance of asking the right questions at the right sites, not limiting the number of sites at which questions are asked, or what questions are posed. Clearly, asking "right questions" at the "right sites" can be difficult and requires an understanding of the "theoretical and substantive knowledge of the discipline" (Trinkley 1990:30-31).

National Register Bulletin 36 (Townsend et al. 1993) provides an essential evaluative process that contains five steps for forming a clearly defined and explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;

- identification of the historic context applicable to the site, providing a framework for the evaluative process;

- identification of the important research questions the site *might* be able to address, given the data sets and the context;

- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of "important" research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

In the case of a survey which identifies multiple sites the process outlined by Townsend et al. (1993) can become burdensome. Consequently, this study has elected to combine some of the steps, making the process more streamlined, without substantively altering the goal to ensure that sites capable of providing significant information are provided the protection afforded in the historic preservation process. The development of a context was not undertaken for each site, but is found outlined in the prehistoric and historic overview section of this report. The identification of "important" research goals is briefly discussed below.

The evaluative process is essentially the same as outlined by Townsend et al. (1993). Data sets and integrity are discussed for each site. In some cases there are a number of data sets, while in others there may be very few data sets. Reference is also made, where appropriate, to the great deal of landscape modification that has occurred. In some places on the base the integrity of many individual house sites, as well as other data sets (such as subsurface features) that might have once been present, has been destroyed. Reference to the prehistoric context is made (when diagnostic material was found) as well as research issues that the site might be able to address. Equally important is the significance of the

subsurface features may be distinguished. *Variety* refers to the qualitative variability in the archaeological remains found at a particular site. *Quantity* refers to the frequency or density of the artifacts or subsurface remains and it is in many ways one of the easiest properties to evaluate (although it is certainly not the most important). The last criterion, *environmental context*, refers to unusual environmental features or zonation which might be important in distinguishing sites or site types.

questions being proposed.

There is no single overview of Georgia's prehistory, yet the synthesized statement offered here points out at least a few of the major research concerns for the Fort Stewart area. While certainly not exhaustive, these will be used to help determine which sites identified in the survey are important to a better understanding of the local prehistory.

Perhaps first and foremost, **it is not clear where the study tract fits in terms of regional chronology.** Fort Stewart sits on the edge of the coastal zone and that portion of the coastal plain often called the Pine Barrens. It is uncertain if the cultural materials found in the study will clearly be subsumed within the chronology and phase development developed for the mouth of the Savannah River or if it will show influences from the Ocmulgee Big Bend or perhaps even other areas. Will sandy-paste Wilmington-like pottery be found? Will various Ocmulgee-like cord marked pottery be found? Will there be evidence of various Lamar phases? Will Refuge materials be found inland on Fort Stewart?

The amount of data present for Fort Stewart is so limited that the 103,550 ha tract is largely *terra incognito.* This problem has been recognized by Campbell et al. (1996:194) and they, too, emphasize the need for additional survey work. Until much more work is done on the base it will be impossible to clearly understand the role it plays in the prehistory of the Georgia Coastal Plain.

Second, **there seems to be little documented information available concerning the importance of this Pine Barren area of Georgia throughout prehistory.** While it is clearly no longer viewed as a hostile wasteland devoid of culture, there remain legitimate questions concerning the frequency of sites, their function, and their distribution on the landscape. Long-term investigations at Fort Stewart provide a unique opportunity to explore these questions and develop a more comprehensive understanding of site locations and densities.

Third, **there is a need to excavate sites that represent the range of types for each phase of the regional sequence.** Only through excavations will it be possible to explore the complete culture history of the area. Excavations are essential to provide accurate descriptions of assemblages and to assess diachronic changes. Excavations are necessary to collect subsistence data, which will have special bearing on the Mississippian groups found in the region. Excavations are also absolutely essential to the development of platforms from which processual studies can be launched.

While the surveys Chicora Foundation is currently under contract to provide do not involve the kinds of excavations necessary, the survey work can identify sites which exhibit the potential to address this need.

One of the secondary goals we outline was to examine the location of both prehistoric and historic sites in relationship to landforms, soil types, proximity to water, and soil drainage. Our goal in this effort is to further refine, or at least explore, the predictive model currently available for Fort Stewart. Our conclusions explore the importance of landform, soil, and drainage issues to settlement and also present additional data on the expected range of site density for the Fort Stewart area.

We also sought to explore the potential for deeply buried sites in the project area. Since some of the soils exhibit deep A horizons, suggestive of considerable deposition, it seemed important, especially for future studies, to more fully explore this potential. In the **Conclusions** section we offer recommendations concerning cost-effective approaches for site identification in the Fort Stewart area. In particular we caution that it is unrealistic to expect deep shovel testing throughout broad interior survey tracts, when there is at least some evidence that sites will be associated with drainages. A more appropriate approach is to conduct deep tests in areas where sites are most likely to be found, while consistently sampling other areas.

Another goal was to determine the ability of 30 m interval shovel test transects to locate

archaeological resources on a given tract. The survey tracts at Fort Stewart, which were found to contain both prehistoric and historic resources, as well as a historic town site, were considered by Chicora as a prime opportunity to study the ability of this archaeological method to determine external site boundaries on widely divergent site types. Both survey tract "A" and survey tract "B" contained prehistoric site locations and historic dispersed settlements. Comparative data from the two survey tracts was used to determine the effectiveness of 30 m transects in these areas of the base.

An equally important methodological issue which became important during the course of this work is whether close interval shovel testing is an appropriate strategy for Phase I survey of large historic communities. Our conclusion, while perhaps not meeting with uniform acceptance, is that 30 m shovel tests are adequate for boundary determinations and for initial assessments. At the survey level, we fear that many sites like those found in the community of Shady Grove cannot be professionally evaluated as more than potentially eligible (and requiring more research) or not eligible (based on heavy disturbance). We seriously doubt that a justifiable eligibility determination can ever be achieved using reasonable expenditure of resources in shovel testing and a single 50 cm test. We also strongly recommend that the United States Army focus on conducting oral history interviews to document details of communities such as Shady Grove.

Another goal was to determine site function/duration based on artifact content. Sassaman et al. (1990) have suggested that examining the tool to debitage ratio can provide functional information about a site. For instance, a low tool-debitage ratio will reflect either "locations of intensive lithic tool production, or locations were tools or cores were modified but not discarded" (Sassaman et al. 1990:224). A high tool-debitage ratio correspond to "relatively intensively utilized locations (e.g. field stations) away from bases and/or sources of lithic raw material" (Sassaman et al. 1990:224). Artifact density is also a method of examining site function since it reflects the "relative intensity of material discard at a site. By extension, the amount of discard is assumed to be proportional to the cumulative duration of site occupation and/or the total number of site occupants, and/or the intensity of activities from which discarded debris was generated" (Sassaman et al. 1990:223). Diversity of the assemblage can also measure the length of occupation since the discard rate of class one artifacts (such as hafted bifaces, pots, atlatls, etc.) is so low that all classes of artifacts will only be found together at sites with long occupational histories (Sassaman et al. 1990:224). This length of occupation can also be measured by the number of components present (Sassaman et al. 1990).

Density studies have also been helpful in determining site function/duration at historic sites. There has been an extensive amount of work done defining site function/duration during European contact, and the colonial, and post-colonial historic period. Extensive studies, conducted at colonial plantation and settlement sites throughout South Carolina (Lewis 1984, 1985; South 1993; Ferguson and Babson n.d.; Trinkley et al. 1995; Barr 1996a) utilize ceramic typologies. European, Native American, and African American earthenwares answer questions related to the function and duration these sites. Quite often, social status and position may be determined as well. Related land use studies may be enhanced by this data.

As well, the nature of Fort Stewart as an active military base has particularly affected the historic archaeological resources found there. A number of studies have been conducted at locations where military activity was instrumental in either the deposition or removal of cultural resources related to their operation (Legg and Smith 1989; Barr 1996b; Trinkley 1996, Trinkley et al., 1996). Initial archaeological studies at these sites tend to find a paucity of material. At Fort Stewart this is probably due to two factors. One is related to the wholesale removal of historic structures found on the base at the time of its acquisition by the United States government in the early 1940s. The second factor is that it has been found, in previous studies, that areas of military activity are often heavily policed according to military regulations. At Fort Stewart, favored bivouac areas tend to be located where previous

historic sites have been recovered. The lack of cultural materials at these sites may be related to ongoing activities by the military, personal collection of artifacts, and camp cleanup.

Archival Research

Given the complete site records available for the Fort Stewart area at the base, these were used in the background research rather than those at either the University of Georgia site files in Athens or Department of Natural Resources files in Atlanta. A total of seven previously recorded archaeological sites were found on record at Fort Stewart for the two survey areas assigned. Six were recorded within the survey tract "A" boundaries and one were found within the survey tract "B" boundaries. No standing structures exist on either of the tracts. Unlike the Taylors Creek survey (Trinkley et al., 1996) which had broad support from former residents of the community for a positive recommendation for possible National Register nomination, very little historic or informant information is available for small communities, such as Shady Grove, previously located within the interior of Fort Stewart (see the **Prehistoric and Historic Overview** section of this report).

Additional map research, for early topographic sheets of the Taylors Creek area, was conducted at the University of South Carolina Thomas Cooper Library Map Repository. Additional information on the Shady Grove community was obtained from the Savannah District Corps of Engineers. Land plats from the purchase of the base property in the 1940s yielded some information concerting the size of the parcels and ownership. Unfortunately, very little other information is available for this community.

Field Survey

As is often the case in field investigations, the boundaries of the survey tract were difficult to locate in the field. Even 7.5' USGS topographic maps fail to show all the detail and complexity of land forms. Added to this is the nature of a landscape actively used by the military. Consequently, project area boundaries were driven with the base archaeologist, Mr. David McKivergan. This was particularly important in survey tract "B", where the southern boundary was defined by an abandoned railroad bed.

As specified by the Georgia State Historic Preservation Division, an archaeological *site* is defined as five or more artifacts in a 20 m area or any two consecutive positive shovel tests. An isolated *occurrence* consists of five or less artifacts. All archaeological sites were assigned state site numbers.

Subsurface testing, for the purpose of boundary definitions, was to consist of testing along cardinal directions at 10 m intervals on sites less than 50 m across and 20 m on larger sites. Since surface finds were minimal, all sites were excavated at 10 m intervals or until a total of 2,500 m^2 area was defined. Shovel testing then was modified to 20 m intervals.

Typically, survey tracts are divided into high, medium, and low archaeological probability zones. At Fort Stewart, it is difficult to estimate the number of prehistoric and historic resources on base because so little intensive archaeology has been done. This lack of data mandated that the whole survey area be considered high probability in the work order issued by the National Park Service.

The scope of work specified that high probability surveys include transects and shovel tests spaced at 30 m intervals across the tract except areas of standing water or with 10% or greater slope. All positive shovel tests were further tested utilizing a cruciform on cardinal directions. Shovel testing was continued until two consecutive negative tests were excavated in a row. This would constitute a site boundary. These boundaries were typically defined based on distance and orientation from a positive shovel test station.

Shovel tests, which were typically 30 cm by 30 cm or greater, were to be excavated to subsoil (i.e., the B horizon by USDA definition) or, if subsoil could not be identified to the maximum depth achievable with a shovel (about 75 cm). Minimally, shovel tests were excavated to about 30

cm below surface. In most cases this represented either the extent of remaining A horizon soil or actually penetrated into the C horizon soils. The majority of tests, however, were excavated to depths of 50 to 70 cm. The fill was screened through 0.62 cm mesh hardware cloth and soil stratigraphy was to be recorded on positive shovel tests.

At some sites there was sufficient surface visibility to also make surface collections. In fact, at some sites (9LG97, for example) there were no positive shovel tests and the sites are defined solely on the basis of surface materials. In order to refine boundaries as much as possible, the materials from these areas were not randomly collected. Instead, a grid defined by the transect lines and the individual shovel tests was established and each 30 m square was examined for materials. Consequently, the positive surface collection designations on the site maps refer to these 30 meter square surface collection areas.

Although the methodology, as outlined in the project scope of work, functioned very well in determining site locations for prehistoric and dispersed historic occupation areas, problems were encountered in the Shady Grove survey area. Although the general testing was according to the scope of work, as outlined above, two concerns related to survey methodology were discussed with Mr. David McKivergan, Fort Stewart Consulting Archaeologist.

The first concern was the Shady Grove community and its spatial layout. The community of Shady Grove is estimated to have covered a central core area of approximately 9 ha. Following the methods used at Taylors Creek (Trinkley et al. 1996) a new assessment, including a number of dispersed farm settlements which may have historically been thought of as part of the community, would increase that area to 75 ha.

Neither the initial assessment of this portion of survey tract "A" by Carolina Archaeological Services (Jackson et al. 1988; 9LG10 site form, Georgia Archaeological Site File, University of Georgia) or the work by the Base Consulting Archaeologist (9LG23 and 9LG28 site forms, Georgia Archaeological Site File, University of Georgia) indicate a presence of a cohesive community.

The previous assignment of individual site numbers for the loci within the community, as well as a lack of historical or informant data for the community's existence, precluded assigning the area a single site number with designated loci for individual sites within its boundaries. Thus, all sites within the boundaries of the historic community were treated as individual sites in the field and were assigned individual site numbers.

The second concern was that of military impacts to the existing physical landscape of what was the Shady Grove community. The vast majority of this area has been severely impacted by military operations over the last 55 years. The initial impact was the forced removal of any residents or structures which may have existed within the community by the United States Army in 1941. Modifications to the landscape have included the use of heavy equipment for the excavation a firing range, berm, and target mover east of site 9LG28 and south of site 9LG99. Other modifications include the excavation of borrow pits and tank hull downs within both survey tracts, firebreak roads, and the widening and construction of roads and their associated drainage systems (which affected some areas as far as 100 m off the road), and the general movement of earth and any cultural artifacts throughout the area by heavy track vehicles.

Although the effects of these modifications are very evident, especially within the central core area of the Shady Grove community, as stated earlier, all sites located within this area were subjected to close interval testing. This was done to ascertain a general idea as to how much of the community was severely impacted by military operations.

Survey transects were plotted and numbered on a project field map (Figures 19 and 20) and transect logs were kept indicating if a shovel test was excavated. In survey tract "A" a total of 444 transects were traversed and a total of 5,755 shovel test units were to be excavated. Of

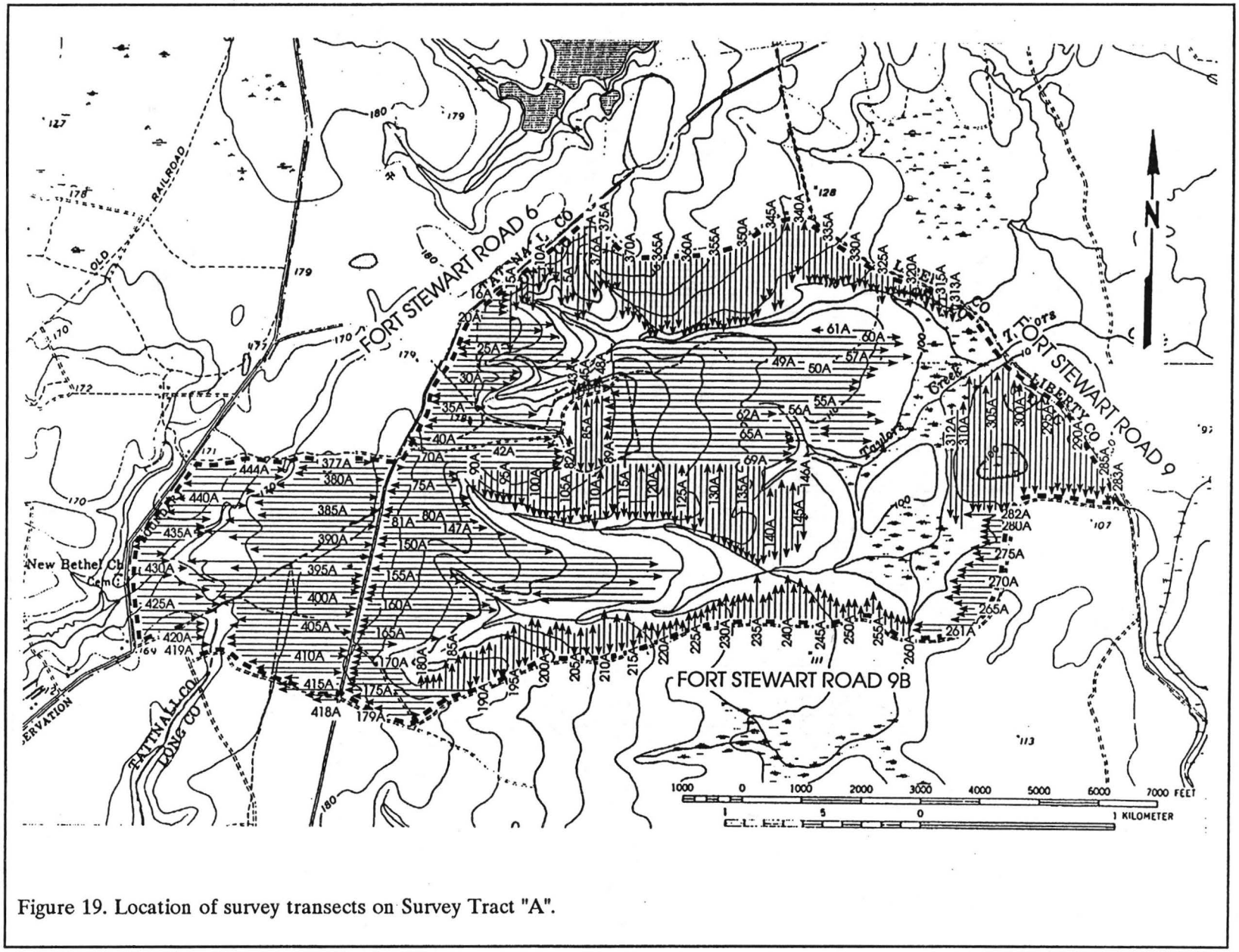


Figure 19. Location of survey transects on Survey Tract "A".

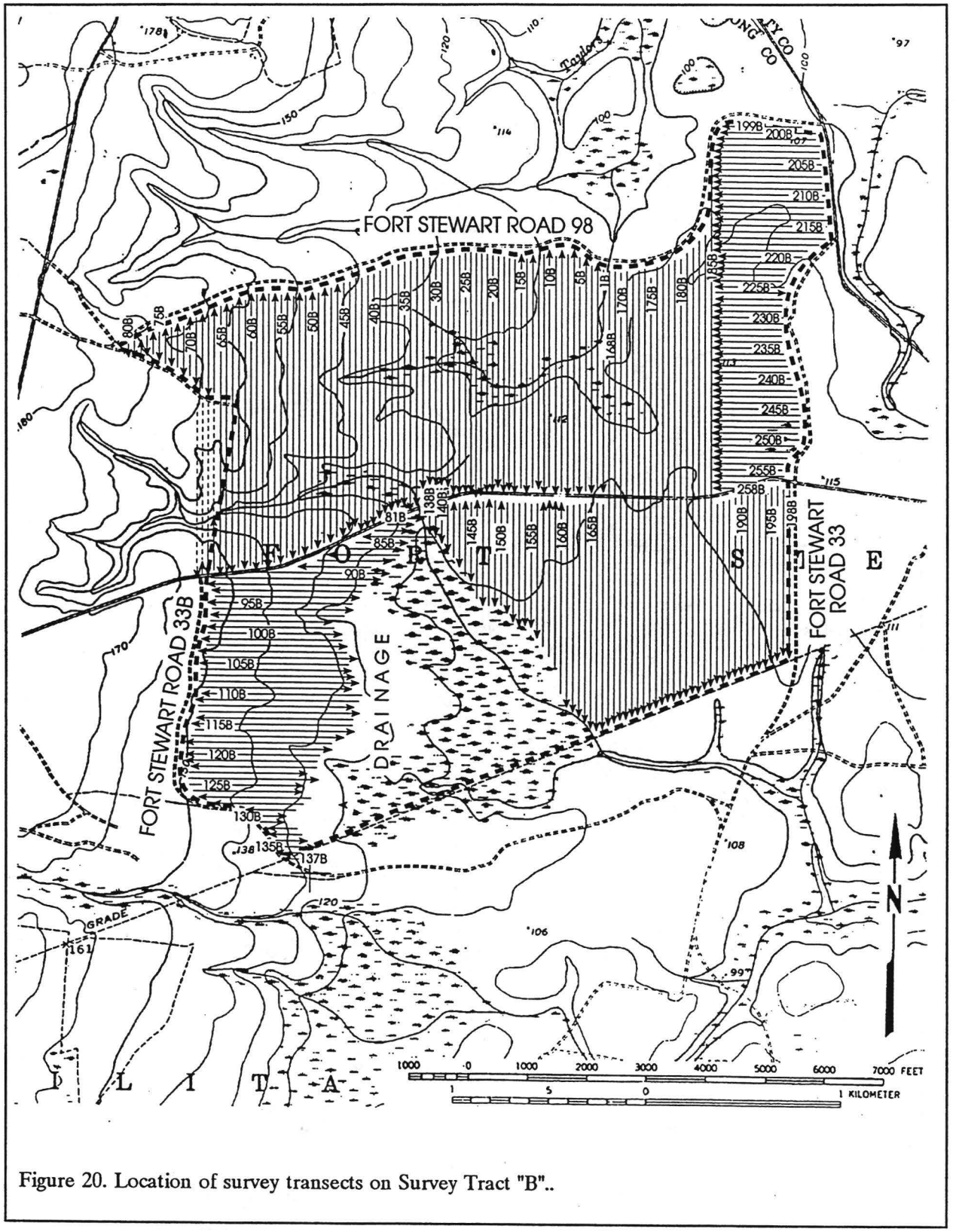


Figure 20. Location of survey transects on Survey Tract "B"..

Table 3.
UTM Coordinates for Sites in Survey Tracts "A" and "B" Using GPS with Selective Availability

	Positions	GPS			Map Interpolation	
Site #	Recorded	N	E	Elevation*	N	E
9LG9	222	3541229	420837	+16 m	3541000	421800
9LG23	205	3540900	420691	+22 m	3539680	420100
9LG28	200	NR	NR		3540120	421000
9LG47	209	3537720	420743	+ 8 m	3537395	420720
9LG94	209	3541514	421203	+20 m	3541300	421160
9LG95	206	3540855	420750	+ 8 m	3540665	420660
9LG96	212	3540434	420519	+14 m	3540225	420560
9LG97	200	NR	NR		3540180	420320
9LG98	275	3540275	420311	+20 m	3540020	420320
9LG99	357	3540683	421320	+11 m	3540500	421320
9LG100	270	3540383	422131	- 4 m	3540140	422200
9LG101	207	3539937	420364	+30 m	3539800	420395
9LG102	205	3539782	420256	+14 m	3539640	420240
9LG103	200	3539765	420372	+10 m	3539620	420320
9LG104	200	NR	NR		3539100	420320
9LG105	205	3539287	420723	+6 m	3539165	420680
9LG106	200	3539104	420741	+12 m	3538920	420740
9LG107	200	NR	NR		3539020	420880
9LG108	205	3539234	421490	- 2 m	3539040	421480
9LG109	210	3540422	423644	- 5 m	3540160	423660
9LG110	207	3540502	423583	- 3 m	3540145	423600
9LG111	207	3540430	423336	+12 m	3540640	423340
9LG112	372	3540576	423262	+.22 m	3540360	423000
9LG113	207	3541309	421583	- 2 m	3541080	421520
9LG114	191	3541325	421427	+ 5 m	3541140	421340
9LG116	193	3539580	419813	+20 m	3539280	419760
9LG117	205	3539388	419836	+11 m	3539140	419820
9LG118	210	3539229	419299	+31 m	3539100	419300
9LG119	205	3539273	419836	+16 m	3539040	419840
9LG120	182	3538119	423745	+ 9 m	3537880	423740
9LG121	225	3539767	423926	+ 9 m	3539579	423845
9LG122	209	3536679	421221	+ 6 m	3536430	421220
9LG123	209	3536836	421357	+12 m	3536430	421290
9LG124	202	3536990	421375	+ 3 m	3536710	421820
9LG125	209	3537756	421255	+ 6 m	3537469	421250
9LG126	211	3538594	420782	+13 m	3538339	420820
9LG127	201	3538657	420870	+14 m	3538380	420898
9LG128	201	3538735	421140	+18 m	3538479	421140
9LG129	220	3538599	421282	+ 6 m	3538358	421309
9LG130	205	3539418	423979	- 15 m	3539110	423960
9TT142	209	3539436	419179	+12 m	3539300	419180
9TT143	200	NR	NR		3540000	420080

* GPS determined altitude by height above the WGS-84 ellipsoid (HAE), not with respect to the mean sea level. The difference between the two can be great and conversion algorithms can have errors of greater than 5 m. Consequently, these figures are ignored. NR = no reading obtained by GPS.

the 5,755 shovel test units anticipated in survey tract "A," 3,242 (or 56%) consisted of shovel tests and the remaining 2,513 were determined to be in lowland areas, bogs, drained or standing marshland, or borrow pits, and consequently were either not excavated or were not screened (the soil only being turned over to verify its wet condition or soil profile).

In survey tract "B" a total of 258 transects were traversed and a total of 6,476 shovel test units were to be excavated. Of the 6,476 shovel test units anticipated in survey tract "A", 4,012 (or 62%) consisted of shovel tests and the remaining 2,464 were determined to be in lowland areas, bogs, drained or standing marshland, or borrow pits, and consequently were either not excavated or were not screened (the soil only being turned over to verify its wet condition or soil profile).

One 50 cm by 50 cm test was to be excavated at each *site* to subsoil or a minimum of 100 cm (assuming subsoil was not reached). Profiles were to be drawn to scale and soil was to be described using a Munsell Soil Color Chart designation. Photographs were taken using black and white and color transparency film.

At each *site*, a sketch map was drawn to scale showing the locations of shovel tests, test units, natural and man-made features, and datums. In addition, GPS positions were to be taken at all *sites*, and at each potentially eligible or eligible *site* a ferrous metal datum (45 to 55 cm in length) was to be established.

The GPS positions were taken with a Trimble GeoExplorer™ rover with *at least* one position recorded. Where possible, additional positions were taken since averaging provides some improvement on accuracy. These readings, as they stand, were all affected by what is called selective availability (S/A). This is the deliberate introduction of errors into the GPS measurements by the Department of Defense. This degradation results in horizonal errors of up to 100 m 95% of the time and vertical errors of up to 173 m 95% of the time.

GPS readings taken with S/A active can be corrected by comparing them to data collected

simultaneously at a known location or base station. Called differential correction (or DGPS), this was undertaken with the Fort Stewart data as postprocessing (Table 3). With correction, the accuracy may be ±5 m.

The critical parameters used by the Chicora rover attempted to maximize both data quality and quantity, using the Trimble recommended default settings (for example, the PDOP mask, which is an indication of the accuracy of the GPS positions which are calculated, is set at 6, with PDOPs below 4 being excellent and above 8 being poor). Although at least 200 positions were recorded at each site location during the current survey, problems with a lack of data were encountered during postprocessing. This problem was discussed with Jeffrey A. Andrews, LCTA Coordinator and GIS specialist at the Fort Stewart DPW/Forestry Branch, Colorado State University. Although unable to isolate problems concerning a lack of data, he did note that "on occasion a GPS unit will not record any positive hits" (Jeff Andrews, personal communication 1996). Fortunately only four sites revealed no readings (see Table 3).

To further explore the validity of our settings and instrument, we asked the LCTA Coordinator and GIS Specialist at Fort Stewart, Jeffrey A. Andrews, to conduct a baseline comparison to determine the accuracy of our unit. The comparison was made using Fort Stewart's LCTA GPS unit, a Trimble Pro-XL running Asset Surveyor. This base unit, operating in overdetermined mode is capable of an accuracy of ±20 cm.

Results of the test confirmed that "under ideal circumstances and proper operation the Trimble GEO Explorer was accurate to within a meter of the reading collected by the Pro-XL." Mr. Andrews, however, does go on to note that the comparison was conducted under ideal circumstances and that the accuracy of our Trimble GEO Explorer "may deteriorate under less than ideal conditions (i.e., dense overstory)" (letter from Jeffrey A. Andrews, dated November 4, 1996).

The only other change we can immediately identify which might improve the quality of the DGPS data would be to schedule data collection times and satellites being used based on their almanac files in order to maximize precision. This, however, is a time consuming technique and also requires that the field survey be scheduled around GPS data acquisition, which is not cost-effective. Consequently, we recommend that reliance continue to be placed on map interpolation as the primary site location technique.

With this in mid, UTMs were also hand plotted. These positions are provided in Table 2. Comparing the DGPS and interpolated map coordinates reveals differences ranging from 160 m to 310 m (with a mean difference of 224 m and a standard deviation of 43 m). While there are certainly problems recording positions in the woods, as any archaeologist will affirm, the interpolated positions have high levels of confidence since they are based on topographic features, distances and bearings to landmarks, and placement within fairly well identified transects. In all cases the hand plotted UTMs are considerably more accurate than the DGPS coordinates.

Datums at potentially eligible sites consisted of a length of iron rebar with approximately 5 cm exposed above ground. An aluminum cap marked with the temporary site number was placed on top of the rebar. Permanent site numbers could not be used as they had not yet been assigned.

No deviations from the original methodology described in the Scope of Work occurred during the field work. No other unusual or expected problems occurred during the study which affects the quality of the data.

Laboratory Methods

The cleaning of artifacts and cataloging of the specimens was conducted during rain days in the field and completed at Chicora laboratories in Columbia in early March 1996. The materials will be curated at Fort Stewart and have been cataloged using that institution's accessioning practices which are an adaptation of those used by the Georgia State Historic Preservation Division.

No specimens were identified which required conservation or stabilization. Specimens were packed in plastic bags and boxed. Field notes were prepared on pH neutral, alkaline buffered paper and photographic materials were processed to archival standards. All field notes, with archival copies, will also be curated with this facility.

Analysis methods focussed on occupation spans, likely functions of the various sites, and changes in raw material or ceramic preferences. With prehistoric sites, diagnostic lithics and/or ceramics provide temporal information. The ceramics were compared to published type descriptions where available (such as DePratter 1991) or relied on general descriptions (such as Snow 1977).

Diagnostic projectile points were likewise compared to published type descriptions (such as Coe 1964 or Bullen 1975). Georgia has, however, borrowed heavily from neighboring states. Often the type descriptions are poor and frequently the materials are poorly recognized or duplicate types in other states. We have tried, where ever possible, to simplify rather than make more complex, the identification of points.

Analysis of the historic collections follow professionally accepted standards with a level of suitability to the quantity and quality of the remains. In general, the temporal, cultural, and typological classifications of historic remains follow such authors as Cushion (1976), Godden (1964, 1985), Miller (1980, 1991), Nöel Hume (1978), Norman-Wilcox (1965), Peirce (1988), Price (1970), South (1977), and Walton (1976). Glass artifacts are identified using sources such as Jones (1986), Jones and Sullivan (1985), McKearin and McKearin (1972), McNally (1982), and Vose (1975). Sutton and Arkush (1996) provide an excellent overview of a broad range of other historic material, although primary sources will typically be provided in the text if the remains require a more detailed analysis.

RESULTS OF SURVEY

Introduction

The cultural resources identified during the intensive survey of the 809 ha survey tract "A" at Fort Stewart consist of 17 archaeological sites and 14 isolated occurrences. Two sites (9LG23, 9LG28) and two isolated occurrences (9LG6, 9LG9) were previously identified by Fort Stewart Consulting Archaeologist David McKivergan. Fifteen sites (9LG94, 9LG97, 9LG99 - 9LG103, 9LG105, 9LG106, 9LG110, 9LG112, 9LG114, 9LG117, 9TT142, and 9TT143) and 12 isolated occurrences (9LG95, 9LG96, 9LG98, 9LG104, 9LG107 - 9LG109, 9LG111, 9LG113, 9LG116, 9LG118, and 9LG119) were discovered during Chicora's 1996-1997 survey (Table 4, Figure 21). None of the sites are recommended eligible for inclusion on the National Register of Historic Places.

The cultural resources identified during the intensive survey of the 804 ha survey tract "B" area consist of three archaeological sites and nine isolated occurrences. One (9LG47) had been previously recorded by Chicora Foundation, Inc. in 1996 (Trinkley et al. 1996). Two other sites (9LG129 and 9LG121) and eight isolated occurrences (9LG122 — 9LG129) were discovered during Chicora's 1996-1997 survey (Table 4, Figure 22). Two of these sites (9LG121 and 9LG130) are recommended as potentially eligible for inclusion on the National Register. Site 9LG130, was found outside the survey boundaries.

Previously Recorded Sites in Survey tract "A"

9LG6

Site 9LG6 was reported by Professional Analysts, Inc. as a prehistoric site located just north of Fort Stewart Road 9B approximately 100 m south of a small tributary of Taylors Creek. No UTMs were originally recorded for the site. The site was reported in Food Plot 215390 (Subtraining area E-16). The soils in this area are classified Stilson loamy sand. The site elevation was recorded as 40 m above mean sea level (AMSL).

Professional Analysts, Inc. recovered one unidentified flake on the eastern edge of the site and three Savannah sherds from the central portion. No subsurface testing was performed and the site was recommended as not warranting further investigation.

Chicora Foundation relocated this site during the present survey. Site 9LG6 is a subsurface lithic scatter located approximately 100 m north of Fort Stewart Road 9B and approximately 1,560 m east of the intersection of Fort Stewart Road 5 and 9B. The central UTM coordinates are N3539140 E421260. The site elevation is 44 m AMSL.

The site is situated on a terrace edge which gently slopes to a drainage of Taylors Creek 100 m to the north. Vegetation at the site consists of planted pines to the north and a cultivated field to the south. The site yielded a total of two artifacts. The site was initially relocated during routine shovel testing (ST2 on T211A) which yielded one metavolcanic flake. An additional 13 shovel tests were excavated on a north-south by east-west cruciform pattern. One chert flake was recovered from shovel test N200E210.

A general surface collection was conducted during subsurface testing. No additional artifacts were collected. The site dimensions are 10 m east-west by 10 m north south area, or approximately 100 m^2.

This site, similar to other isolated occurrences, is recommended as not eligible for inclusion on the National Register of Historic Places. No further investigation of this site is warranted.

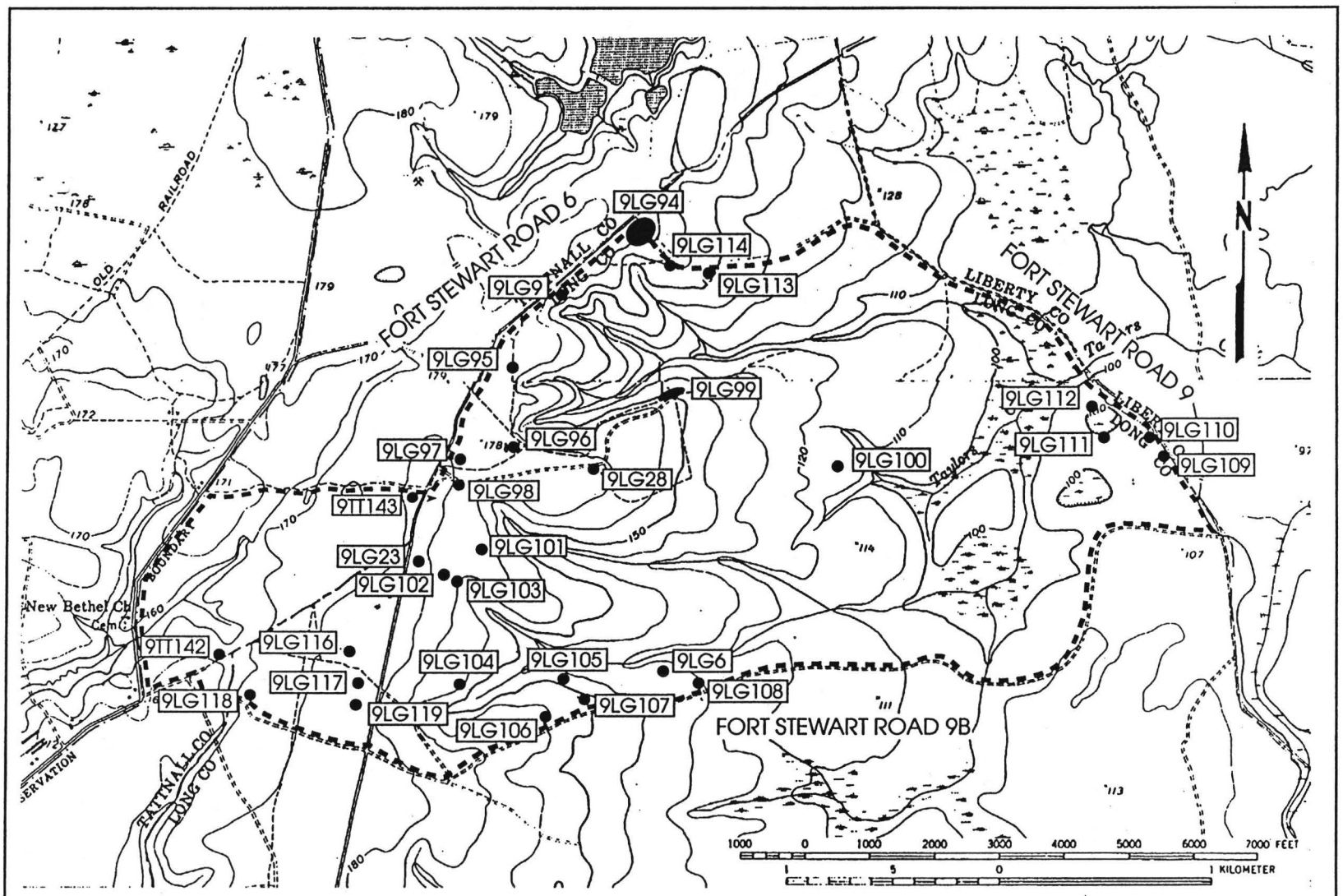


Figure 21. Sites recorded in Survey Tract "A".

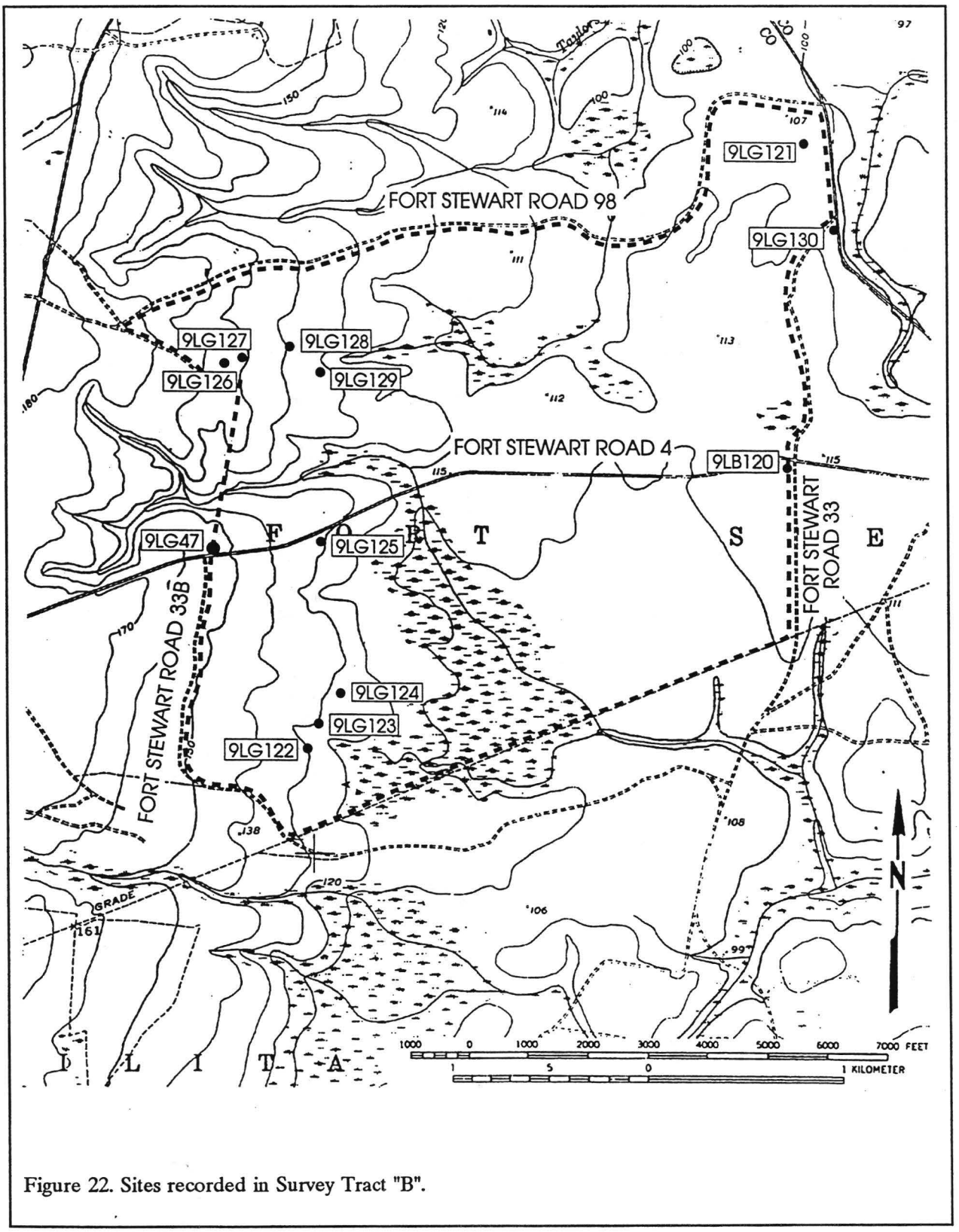


Figure 22. Sites recorded in Survey Tract "B".

Table 4.
Archaeological Sites in Survey Tract "A"
and Survey Tract "B"

Site #	Components	Size	Quad Map	Eligibility
		Survey Tract "A"		
9LG6	lithic	100 m²	Glennville	NE
9LG9	lithic/historic	100 m²	Glennville	NE
9LG10	lithic	0 m²	Glennville	not relocated/NE
9LG23	historic	1,200 m²	Glennville	NE
9LG28	historic	9,000 m²	Glennville	NE
9LG33	historic	0 m²	Glennville	not relocated/NE
9LG94	historic	12,600 m²	Glennville	NE
9LG95	historic	1 m²	Glennville	NE
9LG96	historic	100 m²	Glennville	NE
9LG97	historic	900 m²	Glennville	NE
9LG98	historic	100 m²	Glennville	NE
9LG99	historic	12,000 m²	Glennville	NE
9LG100	lithic	1,400 m²	Glennville	NE
9LG101	historic	1,600 m²	Glennville	NE
9LG102	historic	400 m²	Glennville	NE
9LG103	historic	100 m²	Glennville	NE
9LG104	lithic	50 m²	Glennville	NE
9LG105	historic	9,100 m²	Glennville	NE
9LG106	historic	3,000 m²	Glennville	NE
9LG107	historic	100 m²	Glennville	NE
9LG108	historic	1 m²	Glennville	NE
9LG109	historic	10 m²	Glennville	NE
9LG110	historic	1,000 m²	Glennville	NE
9LG111	historic	1 m²	Glennville	NE
9LG112	historic	3,250 m²	Glennville	NE
9LG113	historic	1 m²	Glennville	NE
9LG114	historic	3,250 m²	Glennville	NE
9LG116	historic	200 m²	Glennville	NE
9LG117	historic	2,275 m²	Glennville	NE
9LG118	historic	200 m²	Glennville	NE
9LG119	historic	1 m²	Glennville	NE
9TT142	historic	2,700 m²	Glennville	NE
9TT143	historic	9,900 m²	Glennville	NE
		Survey Tract "B"		
9LG47	historic	5,850 m²	Glennville	NE
9LG120	historic	450 m²	Glennville	NE
9LG121	historic	5,700 m²	Glennville	PE
9LG122	lithic	1 m²	Glennville	NE
9LG123	lithic	100 m²	Glennville	NE
9LG124	lithic	1 m²	Glennville	NE
9LG125	historic	1 m²	Glennville	NE
9LG126	historic	1 m²	Glennville	NE
9LG127	historic	1 m²	Glennville	NE
9LG128	historic	1 m²	Glennville	NE
9LG129	historic	1 m²	Glennville	NE
9LG130	historic	100	Glennville	PE

NE = not eligible, PE = potentially eligible

9LG9

Site 9LG9 was reported as a prehistoric lithic scatter located approximately 30 m south of Fort Stewart Road 6 and approximately 300 m northeast of the intersection of Fort Stewart Road 5 and 6. The UTM coordinates were reported as N3540950 E420790. The site elevation was recorded as 50 m AMSL.

The site was originally identified by Carolina Archaeological Services in September, 1987. An unknown number of chert flakes were recovered from the surface. No subsurface testing was performed and the site was recommended as not warranting further investigation.

Although the Chicora Foundation relocated this site during the present survey, no prehistoric artifacts were recovered. This site is located approximately 30 m south of Fort Stewart Road 6 and approximately 300 m northeast of the intersection of Fort Stewart Road 5 and 6. The central UTM coordinates are N3541000 E420800. The site elevation is 52 m AMSL.

The site is situated on a ridge top which gently slopes to a drainage of Taylors Creek about 120 m to the south. Vegetation at the site consists of planted pines and scrub oak. The site yielded a total of three artifacts. Site 9LG9 was initially relocated during routine shovel testing (ST1 on T13A) which yielded three whiteware ceramics. An additional eight shovel tests were excavated on a north-south by east-west cruciform pattern. No additional artifacts were recovered through close interval testing.

A general surface collection was conducted during subsurface testing. No additional artifacts were collected. The site dimensions are 10 m east-west by 10 m north south area, or approximately 100 m².

This site, similar to other isolated occurrences, is recommended as not eligible for inclusion on the National Register of Historic Places. No further investigation of this site is warranted.

9LG10

Site 9LG10 is a historic scatter reported to be located approximately 30 m south of Fort Stewart Road 6 and approximately 45 m east of its intersection with Fort Stewart Road 5 and 6. The UTM coordinates were reported as N3540810 E420590. The site elevation was recorded as 50 m AMSL.

The site was originally identified by Carolina Archaeological Services. An unspecified number of historic ceramics and glass were recovered from the surface (Figure 23). No subsurface testing was performed and the site was recommended as not warranting further investigation.

This site was not relocated during the present survey and no material remains were recovered. Due to its location at the intersection of two extant pre-base roads, this area has been heavily impacted by military activities. Several times during the survey this location was observed to contain heavy track vehicles, as well as being used as a bivouac. These activities, along with general cleanup of the area upon departure, have probably eliminated any remains associated with this site.

9LG23

Site 9LG23 was reported as a historic ceramic scatter located just east of Fort Stewart Road 5 and due south and west of two base firebreak roads. The UTM coordinates were recorded as N3539600 E420200. The site elevation was recorded as 55 m AMSL.

The site was originally identified by Fort Stewart Consulting Base Archaeologist David McKivergan in November, 1994. An unknown number of porcelain, whiteware, and stoneware ceramics, along with glass were recovered during these investigations. No subsurface testing was performed and the site status was recommended as unknown.

Chicora Foundation relocated this site during the present survey. Site 9LG23 is a historic

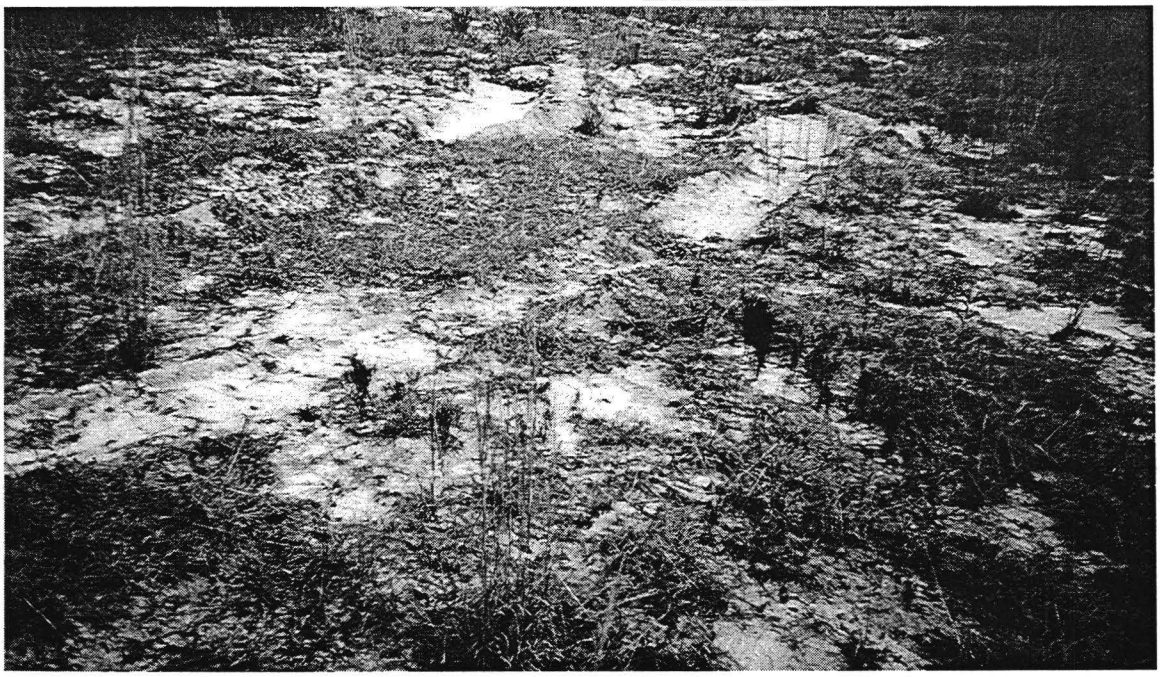


Figure 23. Site 9LG10 at intersection of Fort Stewart Road 5 and 6, view to the east.

ceramic scatter located approximately 900 m north of the intersection of Fort Stewart Road 5 and 9B. The bulk of the site lies due east of Fort Stewart 5 with a small portion extending to the west (Figure 24). The central UTM coordinates for the site are N3539680 E420100. The site elevation is 49 m AMSL.

The sitd is located on a terrace edge which gently slopes to a drainage of Taylors Creek 360 m to the southeast. Vegetation at the site consists of sparse planted pines with an understory of scrub oak. Surface visibility is approximately 60%. This site yielded a total of 38 artifacts. Site 9LG23 was initially relocated during routine shovel testing (ST1 on T147A) which yielded two aqua glass fragments, one clear glass fragment, and one window glass fragment. Thirty-four additional shovel tests were excavated at 10 m hntervals in cardinal directions from the original positive test. Three, or 9%, yielded an additional four artifacts. One yellowware ceramic, was recovered from N200E230, one undecorated whiteware ceramic and one aqua glass fragment were recovered from N200E215, and one chert flake was recovered from N170E200.

A general surface collection was conducted during subsurface testing. The surface collection yielded a total of 30 artifacts. These included four undecorated whiteware ceramics, one striped whiteware ceramic, one stoneware ceramic, eight fragments of aqua glass, one fragment of clear glass, one fragment of black glass, two fragments of blue glass, one fragment of light green glass, one fragment of green glass, two fragments of manganese glass, four fragments of milk glass, two fragments of window glass, and two fragments of animal bone. Artifacts were collected in a 40 m east-west by 30 m north south area, or approximately 1,200 m^2.

A 50 cm test unit was located within the highest concentration of artifacts and excavated to a depth of 70 cm. No artifacts were recovered from this unit. The soil profile of the test unit revealed a very dark grayish brown (10YR 3/2) sand to 8 cm overlaying 4 cm of a dark brown (10YR 3/3) sand. This was over 38 cm of a very pale brown (10YR 7/4) sand with very pale brown (10YR 7/3) and strong brown (7.5YR 5/6) mottles. The remaining 20 cm consisted of a light gray (10YR 7/2) sand with white (10YR 8/1) mottles.

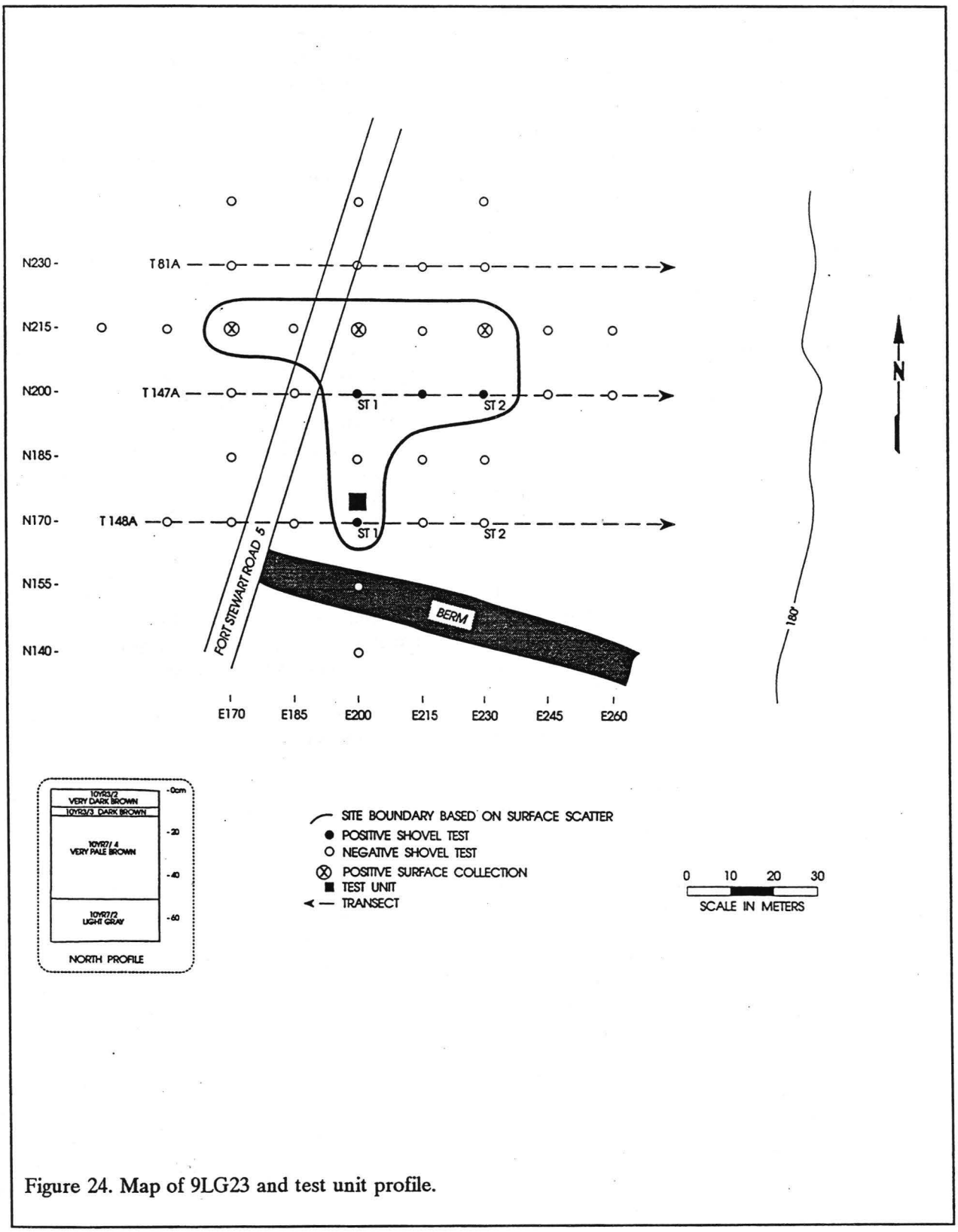


Figure 24. Map of 9LG23 and test unit profile.

The soils from this site are identified as Albany loamy fine sands.

The artifacts recovered during testing indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth century. The mean ceramic date range for the site is 1813 to 1900. Although this collection is similar to that found at other dispersed farmsteads at Fort Stewart, this location corresponds with 26 ha owned by Willie Williams prior to its sale to the United States government on February 25, 1942 (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 975). This site also corresponds well with the location of a house site shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map (Figure 25). The property is located on the southern edge of the central core of the Shady Grove community.

Clearly such sites as 9LG23 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry. Thomas et al. (1995:203) mention that although these sites should be present in the archaeological record, quite often they have been missed by investigators. As well, there appears to be a very limited data base for mid- to late-nineteenth and early twentieth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area, 9LG23 has been heavily impacted by military operations. These soils are classified as Albany loamy fine sands. These soils normally exhibit three A horizons, which may extend to 1.24 m below surface. The soil profile for the site contains four A horizons to a depth of 70 cm. This would suggest that the soils are somewhat disturbed within the upper 70 cm of the site.

Compounding this problem is the use of foundation stones or brick for support of many turn of the century structures. Trinkley et al. (1996:72) report that this would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG23 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG28

Site 9LG28 was reported as a historic ceramic scatter located on a firebreak road approximately 810 m east of the intersection of Fort Stewart Road 5 and the fire break road. This intersection is located approximately 750 m south of the intersection of Fort Stewart Road 5 and 6 (Figure 26). The UTM coordinates were recorded as N3540080 E420940. The site elevation was recorded as 60 m AMSL.

The site was originally identified by Fort Stewart Consulting Base Archaeologist David McKivergan in December, 1994. An unspecified number of porcelain, whiteware, stoneware ceramics, along with bottle glass and amethyst glass were recovered during those investigations. No subsurface testing was performed and the site status was recommended as unknown.

Chicora Foundation relocated this site during the present survey. Site 9LG28 is a historic ceramic scatter located on a firebreak road approximately 810 m east of the intersection of Fort Stewart Road 5 and the fire break road. This intersection is located approximately 750 m south of the intersection of Fort Stewart Road 5 and 6. The site is due east of a former firing range in area E-16. The central UTM coordinates for the site are N3540120 E421000. The site elevation is 52 m AMSL.

The site is located on a ridge top. Vegetation at the site consists of sparse grass with oak and pecan trees resulting in about 40% surface visibility. This site yielded a total of 45 artifacts. Site 9LG28 was initially relocated from surface finds during routine shovel testing. Forty-seven

Figure 25. Extant structures in project area ca. 1920 (Glennville USGS topographic map 1:62,500).

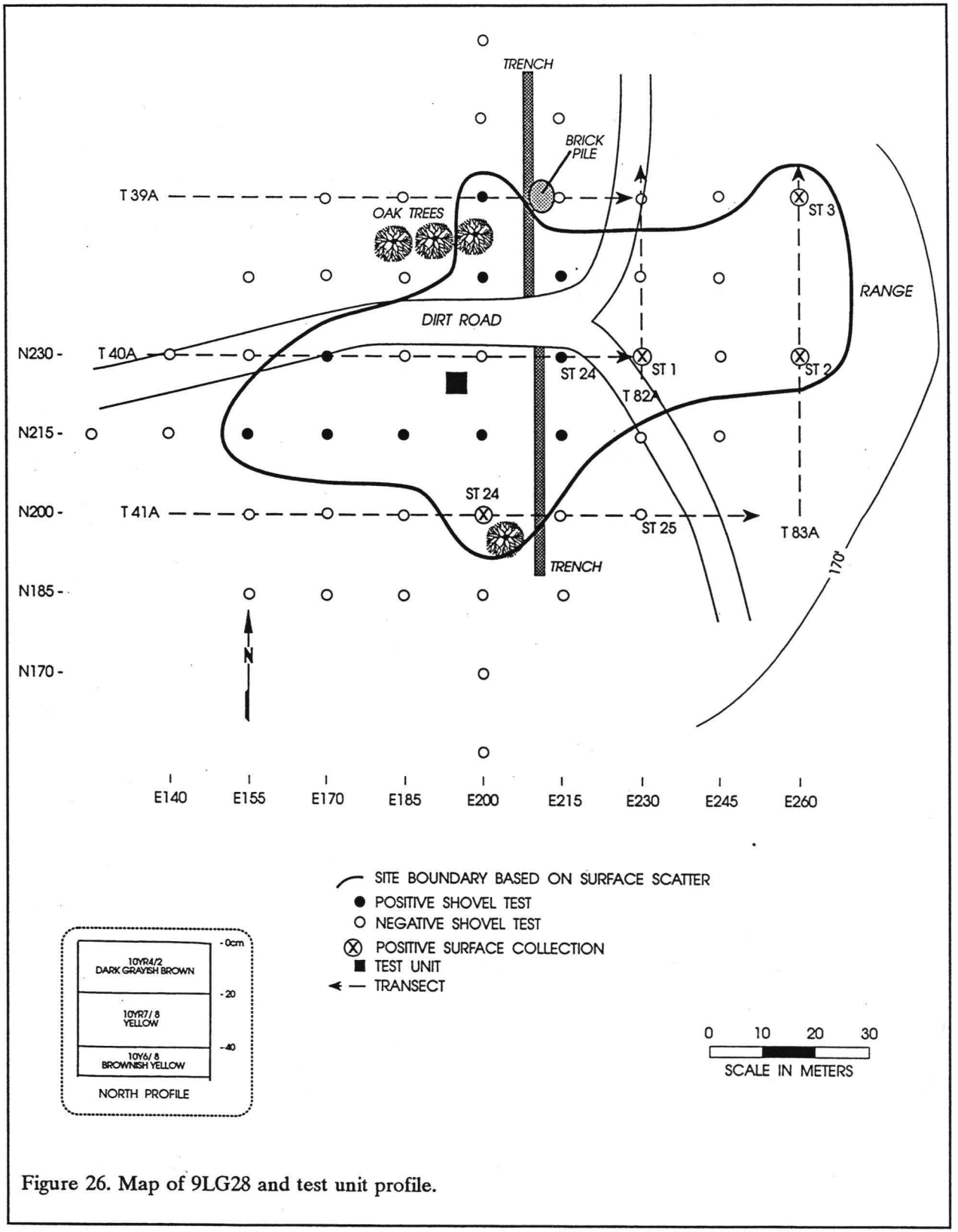


Figure 26. Map of 9LG28 and test unit profile.

shovel tests were excavated at 15 m intervals in cardinal directions from the original positive surface find (ST24 on T41A). Ten, or 21%, yielded a total of 23 artifacts. These included four undecorated whiteware ceramics, two stoneware ceramics, three fragments of aqua glass, three fragments of clear glass, one fragment of manganese glass, one fragment of window glass, one fragment of melted glass, two nail fragments, and six brick fragments.

T= 55 ARTIFACTS

A general surface collection was conducted during subsurface testing. The surface collection yielded a total of 22 artifacts (Table 5). These included undecorated whiteware, stoneware, blue glass, clear glass bottle, light green glass, manganese glass, milk glass, and a black plastic bottle cap. Artifacts were collected in a 150 m east-west by 60 m north south area, or approximately 9,000 m².

Table 5.
Artifacts Recovered from Sub-surface Collections at 9LG28

Unit	Count	Description
N260E200	1	Stoneware, gray salt glazed
N245E215	1	Glass, manganese
N245E200	1	Glass, aqua
N230E215	1	Glass, window
	2	Brick, fragments
N230E170	1	Glass, aqua
N215E200	3	Whiteware, undecorated
	1	Brick, fragment
N215E185	1	Glass, clear
	2	Brick, fragment
N215E170	1	Nail, fragment
	1	Brick, fragment
N215E155	1	Whiteware, undecorated
	1	Stoneware, bristol ext., albany int.
	2	Glass, clear
	1	Glass, melted

A 50 cm test unit was located within the highest concentration of subsurface artifacts and excavated to a depth of 60 cm. No artifacts were recovered from this unit. The soil profile of the test unit revealed a dark grayish brown (10YR 4/2) sand to 20 cm overlaying 20 cm of a yellow (10YR 7/8) sand. This was over 10 cm of brownish yellow (10YR 6/8) sand. The soils from this site are identified as Fuquay loamy sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 72 ha owned by M.W. Mock prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1269). This site corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25). The property is located on the southeastern edge of the central core of the Shady Grove community.

Clearly such sites as 9LG28 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry. Thomas et al. (1995:203) mention that although these sites should be present in the archaeological record, quite often they have been missed by investigators. As well, there appears to be a very limited data base for mid- to late-nineteenth and early twentieth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area, 9LG28 has been heavily impacted by military operations. These soils are classified as Fuquay loamy sands which normally exhibit two A horizons. These typically extend to a depth of 74 cm below surface. The soil profile from the test unit reveals a single A horizon to only 20 cm in depth with a B horizon of yellow (10YR 7/8) sand that typically does not appear in Fuquay series soils until approximately 74 cm. This would suggest that a great deal of deflation, approximately 54 cm, has occurred at the site.

Compounding this problem is the use of foundation stones or brick for support of many turn of the century structures. Trinkley et al. (1996:72) report that this would likely decrease the

chances of any sub-surface features being present. No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG28 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG33

Site 9LG33 is a historic scatter reported to be located approximately 30 m south of Fort Stewart Road 6 and approximately 45 m east of the intersection of Fort Stewart Road 5. The UTM coordinates were reported as N3540420 E420580. The site elevation was recorded as 55 m AMSL.

The site was originally identified by Fort Stewart Consulting Base Archaeologist David McKivergan in December, 1994. An unspecified number of historic ceramics and glass were recovered from the surface. No sub-surface testing was performed and the site status was recommended as unknown.

This site was not relocated during the routine running of transects and no material remains were recovered. This area is commonly used as a bivouac by Fort Stewart personnel. The lack of any evidence for the site may be a result of total collection of the site or military activities and associated cleanup operations.

Newly Recorded Sites in Survey Tract "A"

9LG94

Site 9LG94 is a historic ceramic scatter located approximately 825 m northeast of the intersection of Fort Stewart Roads 5 and 6 due south of Fort Stewart Road 6 (Figure 27). The central UTM coordinates for the site are N3541300 E421160. The site elevation is 53 m AMSL.

The site is situated on a ridge top approximately 240 m north of a portion of the Taylors Creek drainage. Vegetation at the site consists of sparse grass with oak trees. Surface visibility is approximately 70%. The site yielded a total of 49 artifacts. Site 9LG94 was initially discovered from surface finds during routine shovel testing. Seventy-five shovel tests were excavated at 15 m intervals in cardinal directions from the original positive surface find (ST1 on T1A). Seventeen, or 23%, yielded a total of 27 artifacts (Table 6). These included undecorated whiteware, aqua glass, clear glass, manganese glass, window glass, wire cut nails and fragments, and brick.

Table 6.
Artifacts Recovered from Sub-surface Collections at 9LG94

Unit	Count	Description
N245E230	1	Glass, aqua
	1	Nail, fragment
N245E215	1	Brick, fragment
N230E245	1	Nail, wire cut
N230E215	1	Brick, fragment
	1	Nail, fragment
N215E245	1	Nail, wire cut
N215E230	1	Nail, wire cut
N215E200	1	Glass, window
N200E245	1	Glass, clear, modern
N200E170	2	Whiteware, undecorated
N185E275	2	Brick, fragments
N185E245	5	Brick, fragments
N185E200	1	Glass, aqua, bottle neck
N185E140	1	Whiteware, undecorated
	1	Glass, manganese
N170E245	2	Brick, fragments
N170E215	1	Whiteware, undecorated
TU 10-30 cm	1	Porcelain, white
	3	Glass, window
	1	Brick, fragment

A general surface collection was conducted during subsurface testing. The surface collection yielded a total of 17 artifacts. These included nine undecorated whiteware ceramics, one molded whiteware ceramic, one blue transfer print

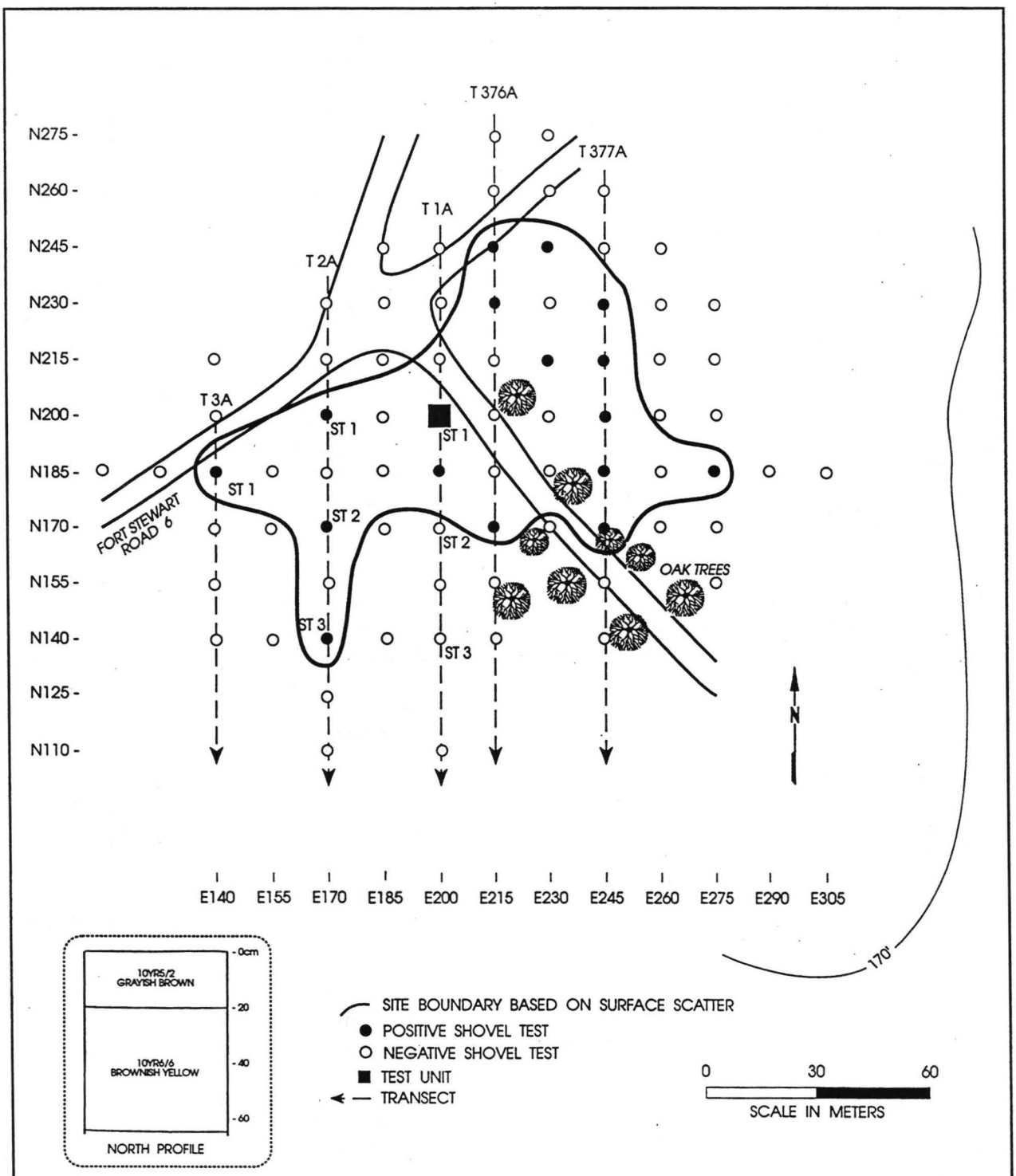


Figure 27. Map of 9LG94 and test unit profile.

whiteware ceramic, one fragment of manganese glass, one fragment of milk glass, one fragment of window glass, one fragment of strap iron, one brick fragment, and one shell.

A 50 cm test unit was centrally located and excavated to a depth of 60 cm. A total of five artifacts were recovered from the 0 to 10 cm level. These included one white porcelain ceramic, three fragments of window glass, and one brick fragment. The soil profile of the test unit revealed a grayish brown (10YR 5/2) sand to 20 cm overlaying 45 cm of a brownish yellow (10YR 6/6) sand. The soils from this site are identified as Fuquay loamy sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 72 ha owned by M.W. Mock prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1269).

Clearly such sites as 9LG94 are important since they have the potential to yield information concerning the presence of dispersed home sites in the Fort Stewart Area. Thomas et al. (1995:205) mention that although these sites should be present in the archaeological record, quite often they have been missed by investigators. As well, there appears to be a very limited data base for mid- to late-nineteenth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area, 9LG94 has been heavily impacted by military operations. These soils are classified as Fuquay loamy sands These soils normally exhibit two A horizons which may extend to a depth of 74 cm below surface. The soil profile from the test unit reveals a single A horizon to only 20 cm in depth with a B horizon of yellow (10YR 7/8) sand that typically does not appear in Fuquay series soils until approximately 74 cm. This would suggest that a great deal of deflation, approximately 54 cm, has occurred at the site.

Compounding this problem is the use of foundation stones or brick for support of many turn of the century structures. Trinkley et al. (1996:72) report that this would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG94 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG97

Site 9LG97 is a historic ceramic scatter located 50 m due east of Fort Stewart Road 5 1,425 m north of the intersection of Fort Stewart roads 5 and 9B (Figure 28). The central UTM coordinates for the site are N3540180 E420320. The site elevation is 52 m AMSL.

The site is situated on a terrace approximately 225 m northwest of portion of the Taylors Creek drainage. Vegetation at the site consists of sparse grass with mixed pine and hardwoods resulting in about 30% surface visibility. Site 9LG97 was initially discovered from surface finds during routine shovel testing and produced nine specimens. Sixteen shovel tests were excavated at 15 m intervals in cardinal directions from the original positive surface find (ST2 on T39A). None of these yielded any artifacts.

A general surface collection, yielding nine artifacts, was conducted during subsurface testing. These included two undecorated and one annular whiteware ceramics, one brown salt glazed stoneware ceramic, and five brick fragments. Artifacts were collected in a 20 m north-south by 45 m east-west area, or approximately 900 m^2.

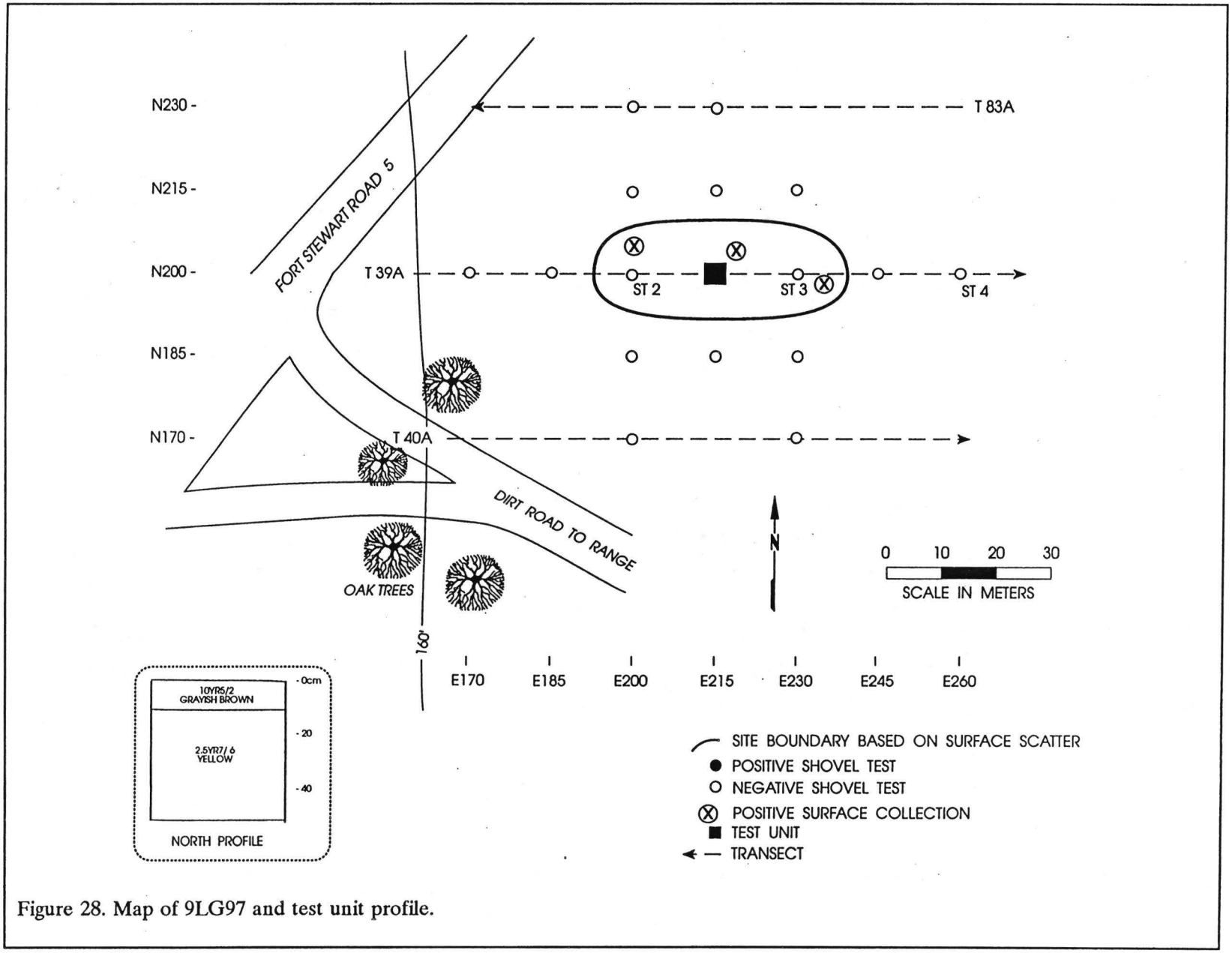


Figure 28. Map of 9LG97 and test unit profile.

A 50 cm test unit was centrally located and excavated to a depth of 75 cm. No artifacts were recovered from this unit. The soil profile of the test unit revealed a grayish brown (10YR 5/2) sand to 10 cm overlaying 65 cm of a yellow (10YR 7/6) sand. The soils from this site are identified as Blanton sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 416 ha owned by Ben Banks prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1487). This site also corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25). The site is located northwest of the central core of the Shady Grove community.

Clearly such sites as 9LG97 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry. Thomas et al. (1995:203) mention that although these sites should be present in the archaeological record, they have been missed by investigators. As well, there appears to be a very limited data base for mid- to late-nineteenth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area which are located at the intersection of extant pre-base roads, 9LG97 has been heavily impacted by military operations. These soils are classified as Blanton loamy sands. These soils normally exhibit three A horizons which may extend to a depth of 1.17 m below surface. The soil profile from the test unit reveals a single A horizon to only 10 cm in depth with a B horizon of yellow (10YR 7/6) sand to a depth of 50 cm. Although soil colors may suffer from investigator bias due to light and/or soil conditions, light yellow soils do not appear in the Blanton series prior to the A22 horizon. This horizon typically contains yellowish brown (10YR 5/6) sand and occurs at a depth of 66 cm below surface. This would suggest that a great deal of deflation, approximately 56 cm, has occurred at the site.

Once again, the use of foundation stones or brick for support of many turn of the century structures (Trinkley et al. 1996:72), would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG97 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG99

Site 9LG99 is a historic ceramic scatter located 1,200 m east of Fort Stewart Road 5 on a firebreak road approximately 1,425 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 29). The central UTM coordinates for the site are N3540500 E421320. The site elevation is 46 m AMSL.

The site is situated on a ridge between the Taylors Creek drainage 90 m to the north and an abandoned firing range to the south. Vegetation at the site consists of very sparse grass with mixed pine and oak. Surface visibility is approximately 50 to 60%. Site 9LG99 was initially discovered from surface finds during routine shovel testing and yielded a total of 193 artifacts. Seventy-five shovel tests were excavated at 15 m intervals in cardinal directions from the original positive surface find (ST3 on T50A). Of these 16 or, 21%, yielded a total of 92 artifacts (Table 7). These included undecorated whiteware, aqua glass, black glass fragment, brown glass, clear glass fragments, green glass, manganese glass, melted glass, a wire cut nail, brick fragments, an iron fragment, and an iron

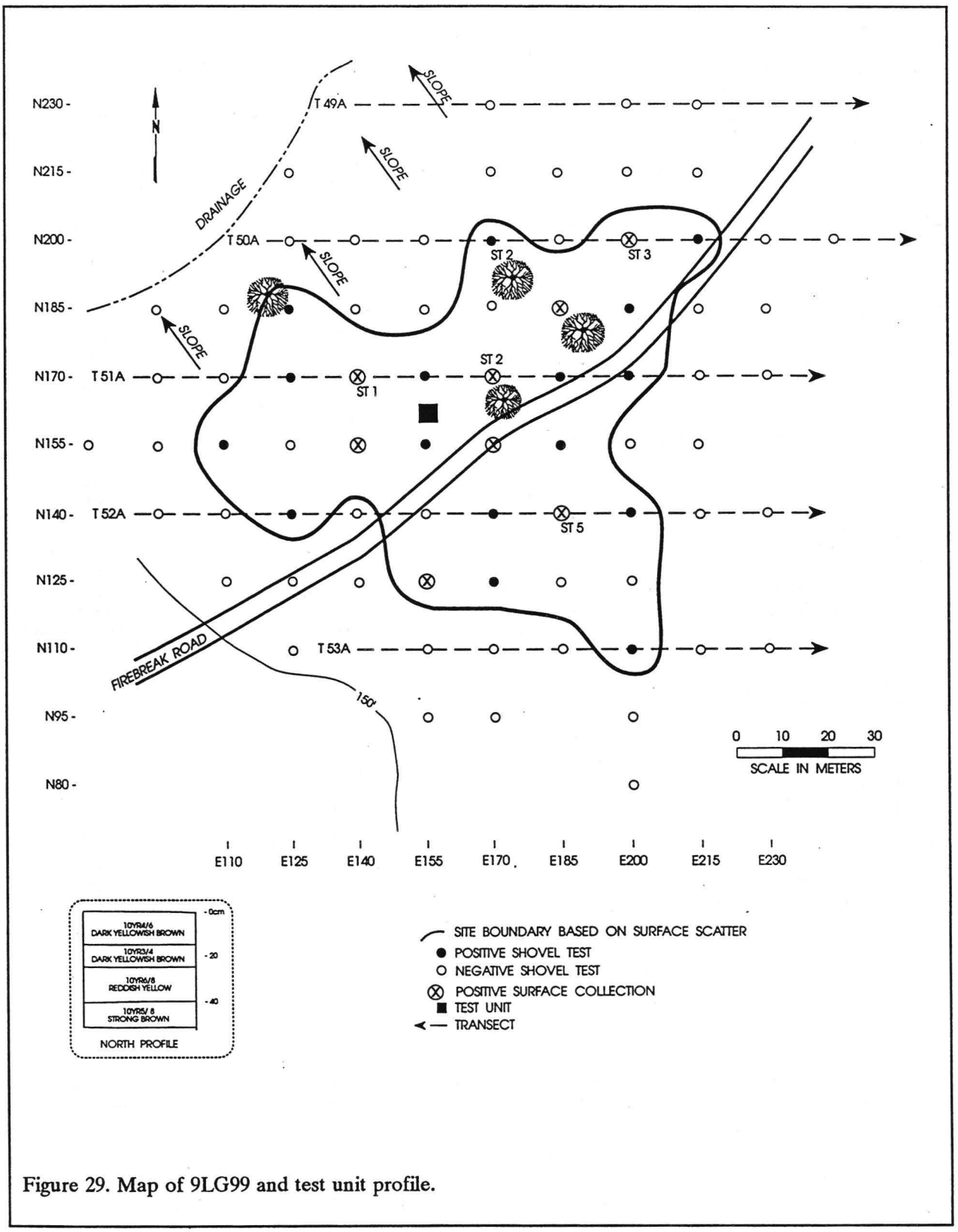


Figure 29. Map of 9LG99 and test unit profile.

rod fragment.

A general surface collection was conducted during subsurface testing. The surface collection yielded a total of 89 artifacts. These included one red earthenware ceramic, two yellowware ceramics, three stoneware ceramics, 25 undecorated whiteware ceramics, 13 fragments of aqua glass, 10 fragments of clear glass, one fragment of brown glass, two fragments of blue glass, three fragments of light green glass, 17 fragments of manganese glass, five fragments of milk glass, two fragments of window glass, two fragments of tortoiseshell, and three brick fragments. Artifacts were collected in a 100 m north-south by 120 m east-west area, or approximately 12,000 m².

A 50 cm test unit was centrally located and excavated to a depth of 65 cm. A total of 12 artifacts were recovered from this unit. These included a fragment of window glass and one brick fragment from the 0 to 10 cm level. One aqua glass fragment, two manganese glass fragments, two nail fragments, one portion of a metal rod, and one brick fragment from the 10 to 20 cm level and two manganese glass fragments and one nail fragment from the 20 to 30 cm level. The soil profile of the test unit revealed a dark yellowish brown (10YR 4/6) sand to 15 cm overlaying 15 cm of a dark yellowish brown (10YR 3/4) sand. This is followed by 15 cm of reddish yellow (10YR 6/8) sand overlying 10 cm of strong brown (10YR 5/8) sand. These soils are classified as Fuquay loamy sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 416 ha owned by Ben Banks prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1487). This site also corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25). The site is located east of the central core of the Shady Grove community.

Table 7.
Artifacts Recovered from Subsurface Collections at 9LG99

Unit	Count	Description
N200E215	1	Glass, manganese
N200E170	2	Brick fragments
N185E200	1	Brick fragment
N185E215	1	Glass, clear
	1	Glass, aqua
N170E200	1	Glass, manganese
	1	Glass, aqua
	1	Nail, wire cut
N170E185	1	Glass, black
	1	Glass, clear
N170E170	1	Glass, window
N170E155	1	Nail fragment
N170E140	2	Whiteware, undecorated
	7	Glass, clear
	1	Glass, window
N170E125	1	Glass, window
N155E185	1	Whiteware, undecorated
	3	Glass, clear
	1	Glass, green
	4	Brick fragments
N155E155	3	Glass, clear
	3	Glass, window
	1	Glass, melted
	1	Iron fragment, UID
N155E110	26	Glass, light green
	1	Glass, window
	1	Brick fragment
N140E200	1	Whiteware, undecorated
N140E170	1	Whiteware, undecorated
	1	Glass, brown
	3	Glass, green
	3	Glass, aqua
	10	Glass, clear
	1	Brick, fragment
N140E125	1	Glass, manganese
N125E170	1	Glass, window
N110E200	1	Brick fragment
TU 9A, 10-20 cm	1	Glass, window
	1	Nail fragment
TU 9A 20 -30 cm	2	Glass, Manganese
	1	Nail fragment
	1	Iron rod fragment
	1	Glass, aqua
TU 9A, 30-40 cm	1	Glass, manganese
	1	Nail fragment

Clearly such sites as 9LG99 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry. Thomas et al. (1995:203) mention that

although these sites should be present in the archaeological record, quite often they have been missed by investigators. As well, there appears to be a very limited data base for mid- to late-nineteenth century agricultural units (Campbell 1996:138).

Similar to other historic site locations in the project area, 9LG99 has been heavily impacted by military operations. These soils are classified as Fuquay loamy sands. These soils typically exhibit two A horizons which may extend to a depth of 74 m below surface. The soil profile from the test unit reveals four different horizons to a depth of 70 cm. Although soil colors may suffer from investigator bias due to light and/or soil conditions twice the number of soil horizons, where there are typically two, would indicate a great deal of soil movement along with periods of soil redeposition.

The use of foundation stones or brick for support of many turn of the century structures (Trinkley et al. 1996:72), would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG99 is recommended as not eligible for inclusion on the National Refister of Historic Places.

9LG100

Site 9LG100 is a prehistoric lithic scatter located 950 m north of Fort Stewart Road 9B and 1,500 m west of the Long and Liberty County Line (Figure 30). The central UTM coordinates for the site are N3540140 E422200. The site elevation is 34 m AMSL.

The site is situated on a terrace approximately 30 m west of a portion of the Taylors Creek drainage and east of a plowed food plot. Vegetation at the site consists of very mixed pine and hardwoods which have completely obscured the ground. The site yielded a total of 11 artifacts. Site 9LG100 was initially discovered during routine shovel testing (ST2 on T66A) from which two chert flakes and one chert biface fragment were recovered. Thirty-four additional shovel tests were excavated at 10 m intervals in cardinal directions from the original positive shovel test. Of these 5, or 15%, yielded a total of 5 artifacts including four chert flakes and one metavolcanic flake.

Although a general surface collection was conducted during subsurface testing, no additional artifacts were collected. The site dimensions are 20 m north-south by 70 m east-west area, or approximately 1,400 m^2.

A 50 cm test unit was centrally located and excavated to a depth of 100 cm. A total of 3 artifacts were recovered from this unit, including two chert flakes from a depth of 20 to 30 cm and one chert flake from a depth of 70 to 80 cm. The soil profile of the test unit revealed a dark grayish brown (10YR 4/2) sand to 18 cm overlaying 10 cm of a dark yellowish brown (10YR 6/4) sand. This is followed by 7 cm of very pale brown (10YR 7/4) sand over 23 cm of very pale brown (10YR 7/4) with reddish yellow (7.5YR 7/6) mottles. This is followed by 24 cm of light gray 10YR 7/2) sand. These soils are classified as Albany loamy fine sands.

The artifacts recovered during testing would indicate the presence of a prehistoric lithic work station. Unfortunately no diagnostic artifacts were recovered from this site. This very sparse assemblage suggests that the site functioned as a limited activity site.

Much like the historic sites found in the project area, site 9LG100 appears to suffer from soil disturbance, probably due to military activity and/or farming and logging activities. Its apparently poor stratigraphic condition, as well as the paucity of remains, both surface and sub-surface, coupled with the lack of either diagnostic materials or features identified with the test unit suggest this site contains a very low density of

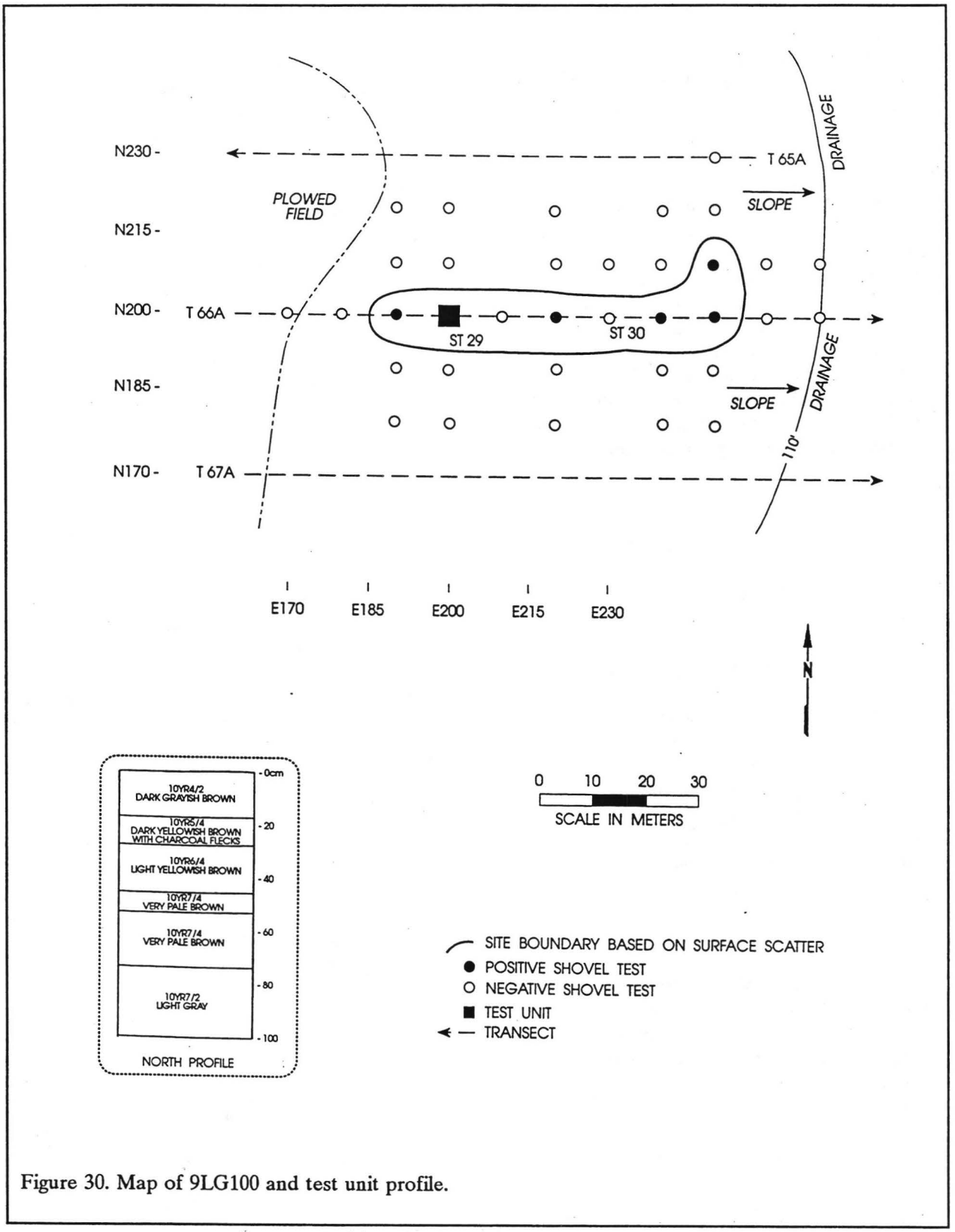


Figure 30. Map of 9LG100 and test unit profile.

cultural materials. It is unlikely that the site can address significant research questions. Site 9LG100 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG101

Site 9LG101 is a historic ceramic scatter located 270 m east of Fort Stewart Road 5 on a firebreak road approximately 990 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 31). The central UTM coordinates for the site are N3539800 E420395. The site elevation is 50 m AMSL.

The site is situated on a ridge top approximately 180 m west of a portion of the Taylors Creek drainage. It is also bisected by a firebreak road. Vegetation at the site consists of grass and a grove of oak surrounded by pine resulting in approximately 10 to 25% surface visibility. The site yielded a total of 56 artifacts.

Table 8.
Artifacts Recovered from Sub-surface Collections at 9LG101

Unit	Count	Description
N200E200	3	Whiteware, undecorated
	1	Glass, aqua
	5	Glass, clear
	1	Glass, milk
N200E185	5	Whiteware, undecorated
	1	Glass, brown
	2	Glass, clear
	3	Nail, fragments
N185E170	1	Button, fragment
	1	Brick, fragment
N185E185	1	Whiteware, black stripe
	3	Glass, clear
N170E185	2	Glass, brown
N170E170	8	Glass, clear
	1	Glass, milk
	2	Iron, fragments
N170E155	1	Stoneware
	1	Glass, manganese
	2	Glass, clear
	5	Brick, fragments
TU 10-30 cm	1	Glass, window

Site 9LG101 was initially discovered during routine shovel testing (ST7 on T80A) from which three undecorated whiteware ceramics, one fragment of aqua glass, five fragments of clear glass, and one fragment of milk glass were recovered. Thirty additional shovel tests were excavated at 15 m intervals in cardinal directions from the original positive shovel test. Of these 7 or, 23%, yielded a total of 39 artifacts (Table 8). These included undecorated whiteware, decorated whiteware, stoneware, clear glass, brown glass, manganese glass, milk glass, nail fragments, brick fragments, unidentifiable iron fragments, and a button fragment.

A general surface collection, producing nine artifacts, was conducted during subsurface testing. These included two undecorated whiteware ceramics, one porcelain ceramic, one fragment each of brown, aqua, clear, and three fragments of milk glass. Artifacts were collected in a 32 m north-south by 50 m east-west area, or approximately 1,600 m².

A 50 cm test unit was centrally located and excavated to a depth of 80 cm. A total of eight specimens were recovered from this unit. These included one fragment of window glass from the 0 to 10 cm level. Two wood fragments, two nail fragments, and two brick fragments from the 10 to 20 cm level, and one brick fragment from the 20 to 30 cm level. The soil profile of the test unit revealed a dark red (10R 3/6) loamy sand to 15 cm overlaying 25 cm of a dark grayish brown (10YR 4/2) sand. This is followed by 30 cm of light yellowish brown (10YR 6/4) sand overlying 10 cm of light yellowish brown (10YR 6/4) sand with strong brown (7.5YR 5/8) and dark grayish brown (10YR 4/2) mottles. These soils are classified as Albany loamy fine sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 140 ha owned by Lillian Whitten prior to its sale to the United States government probably sometime in the 1940s (Savannah District,

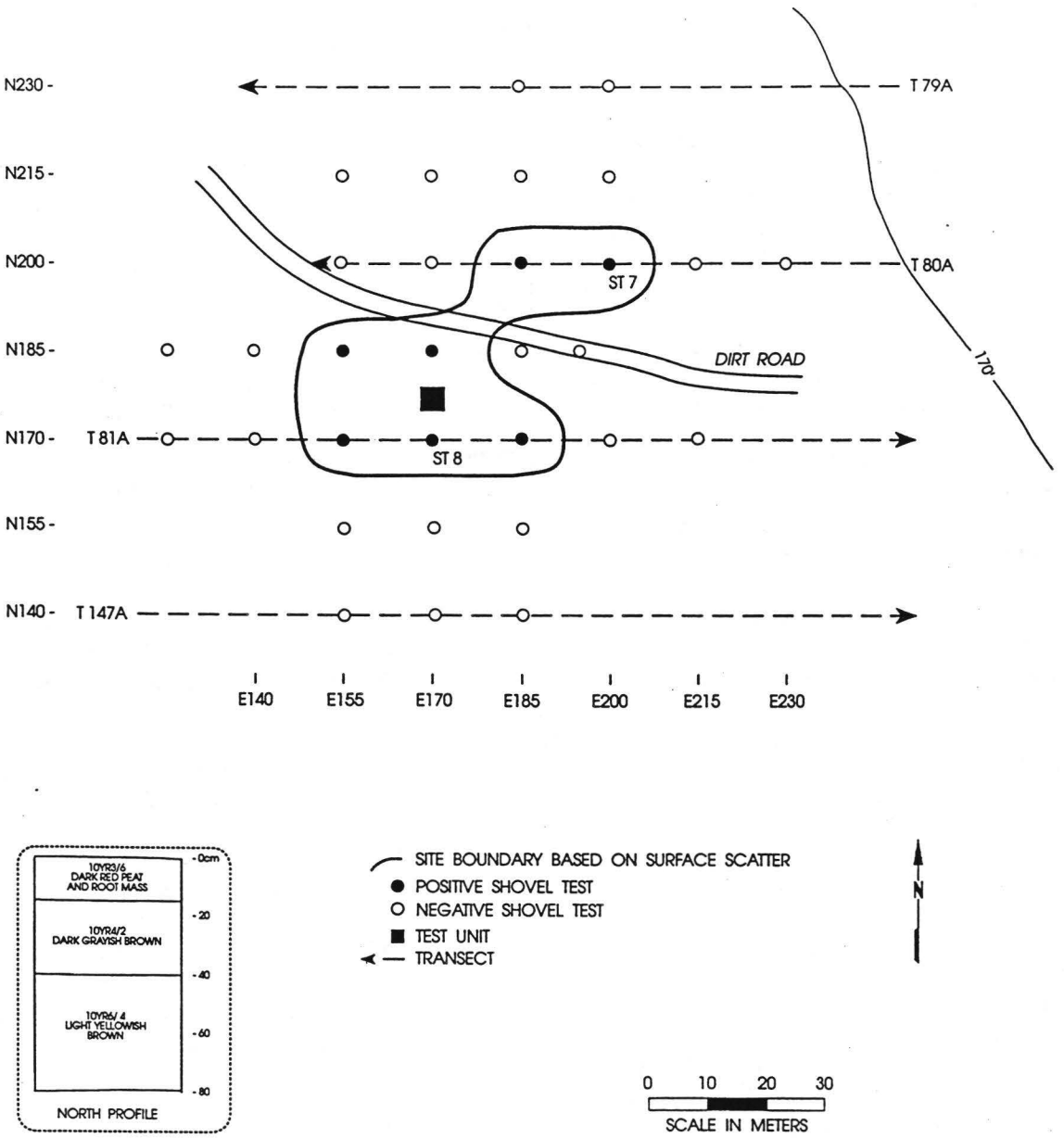


Figure 31. Map of 9LG101 and test unit profile.

Corps of Engineers, Drawing Number 4860-14, Tract 1276). This site also corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25). The property is located on the southeastern edge of the central portion of the Shady Grove community.

Sites such as 9LG101 are important since they have the potential to yield very important information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry. Not only is there a lack of archaeological evidence concerning communities associated with this economic base (Thomas et al. 1995:203), there also appears to be a very limited data base for mid- to late-nineteenth and early twentieth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area, 9LG101 has been heavily impacted by military operations. These soils are classified as Albany loamy fine sands which normally exhibit three A horizons. These generally extend to 1.24 m below surface. The soil profile for the site contains five horizons to a depth of 50 cm. Although soil colors may suffer from investigator bias due to light and/or soil conditions the presence of five soil horizons where there are typically three would suggest a great deal of soil movement along with periods of soil redeposition.

The use of foundation stones or brick for support of many turn of the century structures (Trinkley et al. 1996:72), would also likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG101 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG102

Site 9LG102 is a historic ceramic scatter located 180 m east of Fort Stewart Road 5 between two firebreak roads approximately 810 m north of the intersection of Fort Stewart roads 5 and 9B (Figure 32). The central UTM coordinates for the site are N3539640 E420240. The site elevation is 50 m AMSL.

The site is situated on a terrace approximately 150 m northwest of a portion of the Taylors Creek drainage and is bordered by firebreak roads to the north, east, and west. Vegetation at the site consists of sparse grass and pine. Surface visibility is approximately 10 to 20%. The site yielded a total of 13 artifacts.

Site 9LG102 was initially discovered during routine shovel testing (ST23 on T149A) from which two fragments of clear glass were recovered. An additional 19 shovel tests were excavated at 15 m intervals in cardinal directions from the original positive shovel test. Of these two, or 15%, yielded a total of three artifacts. These included one stoneware ceramic from N190E200 and two fragments of manganese glass from N170E200.

A general surface collection, producing five artifacts, was conducted during subsurface testing. These included four undecorated whiteware ceramics and one porcelain ceramic. Artifacts were collected in a 40 m north-south by 10 m east-west area, or approximately 400 m^2.

A 50 cm test unit was centrally located and excavated to a depth of 60 cm. A total of three artifacts were recovered from this unit. These included one clear glass fragment, one nail fragment, and one unidentifiable iron fragment from the 10 to 20 cm level. The soil profile of the test unit revealed a dark gray (10YR 4/1) loamy sand to 20 cm overlaying 22 cm of a light yellowish brown (10YR 6/4) sand. This is followed by 18 cm of very pale brown (10YR 7/3) sand. These soils are classified as Albany loamy fine sands.

The artifacts recovered during testing

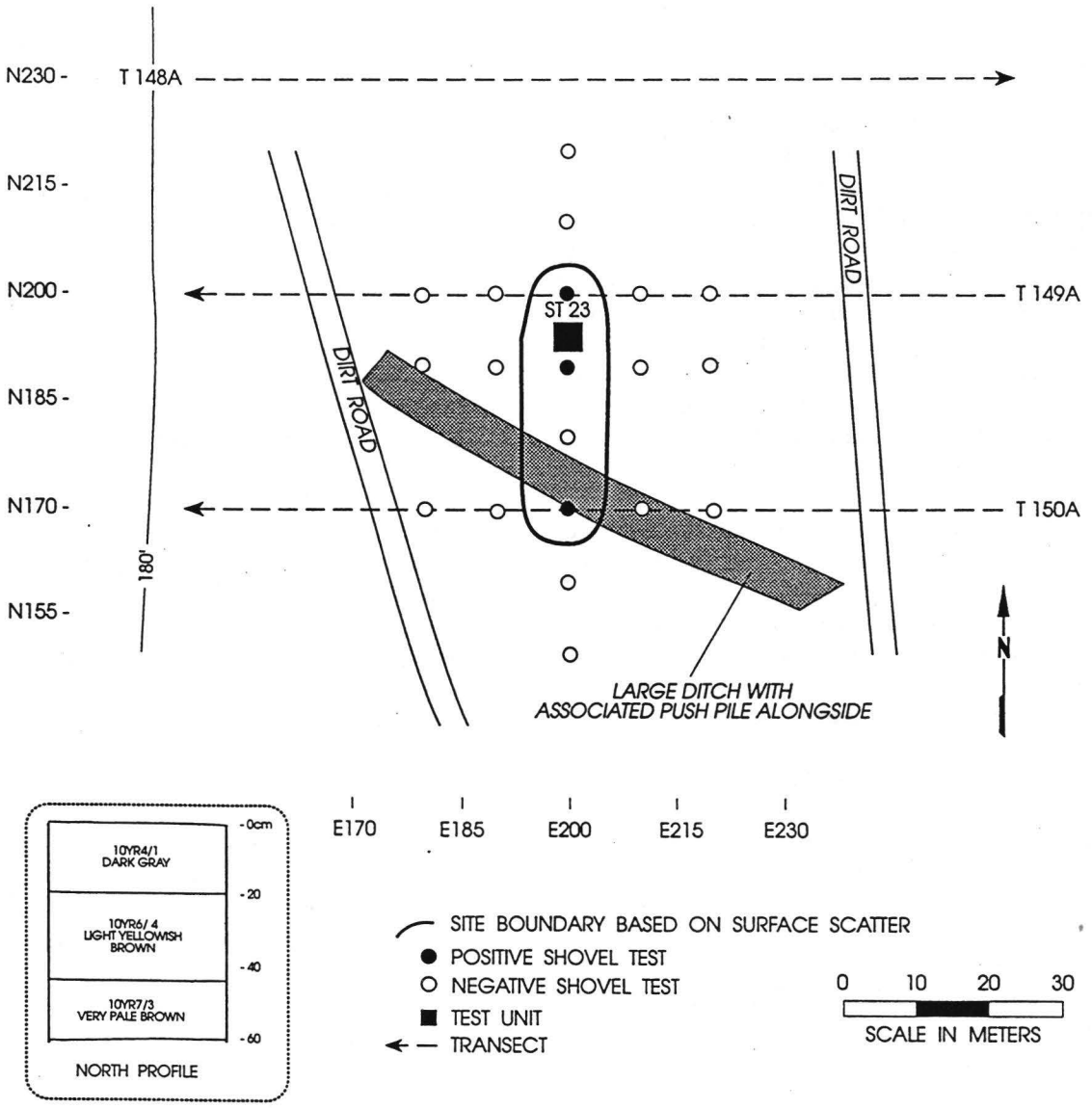


Figure 32. Map of 9LG102 and test unit profile.

would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location generally corresponds with 26 ha owned by Willie Williams prior to its sale to the United States government on February 25, 1942 (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 975), but does not correspond with the location of a any house sites shown on the 1920 USGS Glennville quadrangle map. The property is located on the south of the central core of the Shady Grove community.

Sites such as 9LG102 are important to our understanding since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late-nineteenth and early twentieth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area, 9LG102 has been heavily impacted by military operations. These soils are classified as Albany loamy fine sands which normally exhibit three A horizons to a depth of 1.24 m. The soil profile for the site does contain three A horizons, but they all occur within the top 50 cm of the profile suggesting that the profile has been truncated.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG102 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG103

Site 9LG103 is a historic ceramic scatter located 275 m east of Fort Stewart Road 5 approximately 810 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 33). The central UTM coordinates for the site are N3539620 E420320. The site elevation is 52 m AMSL.

The site is situated on a terrace approximately 75 m northwest of the Taylors Creek drainage. Vegetation at the site consists of sparse grass and pine reduced surface visibility to about 20%. The site yielded a total of 90 artifacts.

Site 9LG103 was initially discovered during routine shovel testing (ST22 on T150A) from which one fragment of clear glass, three zinc preserve jar cap fragments, and 10 iron can fragments were recovered. An additional eight shovel tests were excavated at 10 m intervals in cardinal directions from the original positive shovel test. None of these yielded any additional artifacts.

A general surface collection was conducted during subsurface testing. The site yielded a total of 19 artifacts. These included two fragments aqua glass, three fragments of clear glass, six fragments of milk glass, 12 zinc preserve jar cap fragments, one zinc preserve jar cap with milk glass attached, and one iron can fragment. Artifacts were collected in a 10 m north-south by 10 m east-west area, or approximately 100 m^2.

A 50 cm test unit was centrally located and excavated to a depth of 60 cm. A total of 51 artifacts were recovered from this unit. These included one aqua glass fragment, 12 clear glass fragments, four zinc preserve jar cap fragments, and 11 UID iron fragments recovered from the 10 to 20 cm level and one aqua glass fragment, five clear glass fragments, one milk glass fragment, and 10 iron can fragments recovered from the 10 to 20

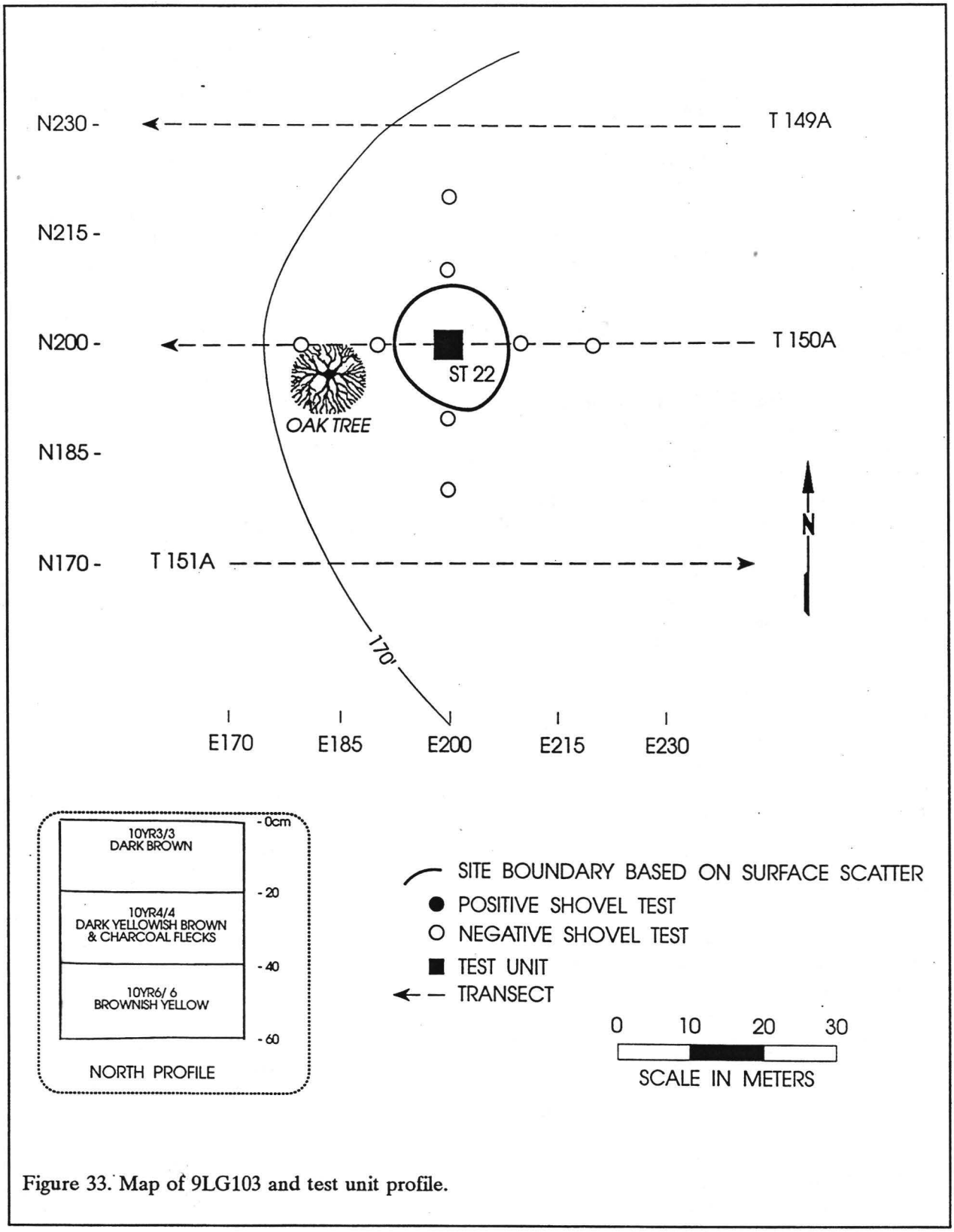


Figure 33. Map of 9LG103 and test unit profile.

cm level. Two fragments each of clear glass and milk glass, as well as two iron can fragments were recovered from the 20 to 30 cm level. The soil profile of the test unit revealed a dark brown (10YR 3/3) sand to 20 cm overlaying 20 cm of a dark yellowish brown (10YR 4/4) sand. This is followed by 10 cm of brownish yellow (10YR 6/6) sand with dark yellowish brown (10YR 1/4) and reddish yellow (7.5 YR 6/6) mottles over 5 cm of yellowish brown (10YR 6/6) sand with reddish yellow (7.5YR 6/8) mottles. These soils are classified as Albany loamy fine sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth century. Although this collection is similar to that found at other dispersed farmsteads at Fort Stewart, this location lies just east the property line of the 26 ha owned by Willie Williams prior to its sale to the United States government on February 25, 1942 and within the 140 ha parcel owned by Lillian Whitten (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1276). This site does not correspond with the location of any house sites shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map. The property is located southeast of the central core of the Shady Grove community.

Sites such as 9LG103 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry (Thomas et al. 1995:203), yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late nineteenth and early twentieth century agricultural units (Campbell et al. 1996:138).

Similar to other sites in the project area, 9LG103 has been heavily impacted by military operations. These soils are classified as Albany loamy fine sands which have been previously described. The soil profile for the site suggests that the soils at this site have had several periods of deflation and re-deposition.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG103 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG105

Site 9LG105 is a prehistoric lithic scatter located 280 m north of Fort Stewart Road 9B approximately 480 m east of the intersection of Fort Stewart Roads 5 and 9B (Figure 34). The central UTM coordinates for the site are N3539165 E420680. The site elevation is 40 m AMSL.

The site is located on a ridge side slope of about 5% bordered to the north-northwest by the Taylors Creek drainage. Vegetation at the site is dominated by pine, and surface visibility is non-existent. The site yielded a total of 23 artifacts.

Site 9LG105 was initially discovered during routine shovel testing (ST1 on T193A) from which one Savannah Check Stamped sherd was recovered. An additional 58 shovel tests were excavated at 15 m intervals in cardinal directions from the original positive location. Of these 14, or 24%, yielded a total of 18 artifacts which included chert flakes, a metavolcanic flake, a sandstone flake, as well as a small prehistoric pottery sherd (Table 9).

A general surface collection was conducted during subsurface testing. Two artifacts were collected which included one chert flake and one fragment of window glass. Artifacts were collected in a 130 m north-south by 70 m east-west area, or approximately 9,100 m^2.

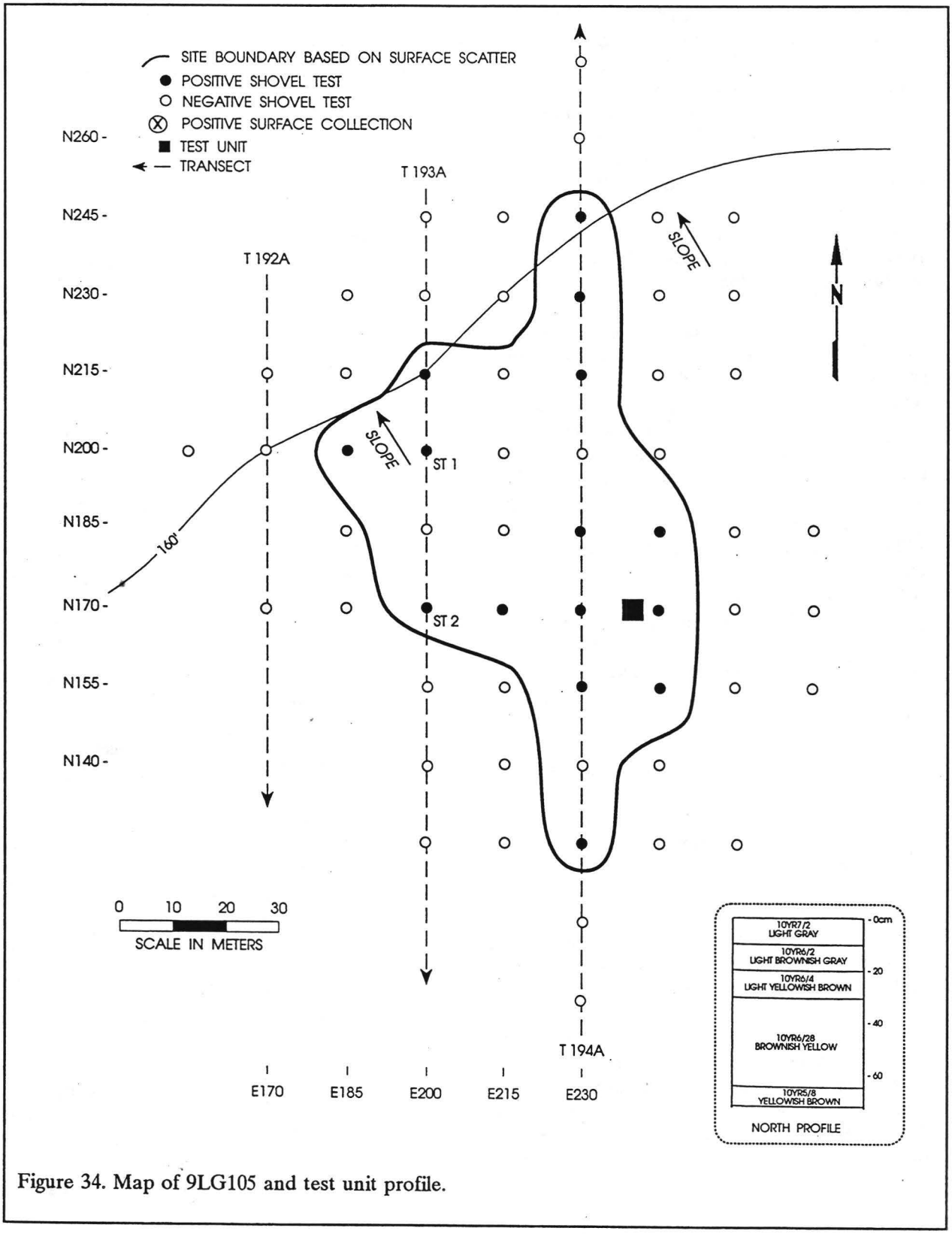


Figure 34. Map of 9LG105 and test unit profile.

Table 9.
Artifacts Recovered from Sub-surface Collections at 9LG105

Unit	Count	Description
N245E230	1	Flake, metavolcanic
N230E230	1	Flake, chert
N215E230	1	Flake, chert
N215E200	1	Flake, chert
N200E200	1	Sherd, Savannah Check Stamped
N200E185	1	Flake, chert
N185E245	1	Flake, chert
N185E230	1	Flake, chert
N170E245	1	Flake, chert
N170E230	1	Flake, chert
	1	Flake, sandstone
N170E215	3	Flake, chert
N170E200	1	Sherd, small prehistoric
N155E245	1	Flake, chert
N155E230	1	Flake, chert
N125E230	1	Flake, chert
TU 00-10 cm	1	Flake, chert
TU 20-30 cm	1	Flake, metavolcanic
TU 30-40 cm	1	Flake, chert

A 50 cm test unit was centrally located and excavated to a depth of 70 cm. A total of 3 artifacts were recovered from this unit. These included one chert flake from a depth of 0 to 10 cm, one metavolcanic flake from a depth of 20 to 30 cm, and one chert flake from a depth of 30 to 40 cm. The soil profile of the test unit revealed a light gray (10YR 7/2) sand to 10 cm overlying 10 cm of a light brownish gray (10YR 6/2) sand. This is followed by 10 cm of light yellowish brown (10YR 6/4) sand over 45 cm of brownish yellow (10YR 6/8) sand over a yellowish brown (10YR 5/8) sand. These soils are classified as Ellabelle loamy sands.

The artifacts recovered during testing would indicate the possible presence of a limited activity site. Only one diagnostic artifact was recovered from this site which would indicate a Mississippian occupation.

Unfortunately, much like the historic sites found in the project area, site 9LG105 appears to suffer from soil disturbance, probably due to military, farming, or logging activities. The Ellabelle series typically contains an A horizon of black (10YR 2/1) loamy sand which extends 58 cm below the surface. The site test unit profile is void of this A horizon. Due to its poor stratigraphic condition, as well as the paucity of remains, both surface and sub-surface, coupled with the lack of features identified in the test unit it is unlikely that the site can address significant research questions. Site 9LG105 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG106

Site 9LG106 is a historic ceramic scatter located due north of Fort Stewart Road 9B approximately 480 m northeast of the intersection of Fort Stewart Roads 5 and 9B (Figure 35). The central UTM coordinates for the site are N3538920 E420740. The site elevation is 49 m AMSL.

The site is situated on a ridge approximately 210 m south of the Taylors Creek drainage. Vegetation at the site consists of planted pine to the north and sparse grass and farm pine to the south resulting in limited visibility surface visibility.

The site yielded a total of 49 artifacts, and was initially discovered during routine shovel testing (ST2 on T194A) from which one undecorated whiteware ceramic was recovered. An additional 19 shovel tests were excavated at 15 m intervals in cardinal directions from the original positive location. Two of these, or 13%, yielded three artifacts. These included one rubber shoe sole from N215E200 and two fragments of light green glass from N170E200.

A general surface collection, resulting in the collection of 25 artifacts, was conducted during subsurface testing. These included eight undecorated whiteware ceramics, one porcelain ceramic, one fragment of aqua glass, one fragment of light green glass, four fragments of clear glass, three clear glass bottles, one fragment of manganese glass, two fragments of milk glass, two zinc preserve jar cap fragments, one brick fragment, and one iron plow fragment. Artifacts were collected from a 50 m north-south by 60 m east-west area, or approximately 3,000 m^2.

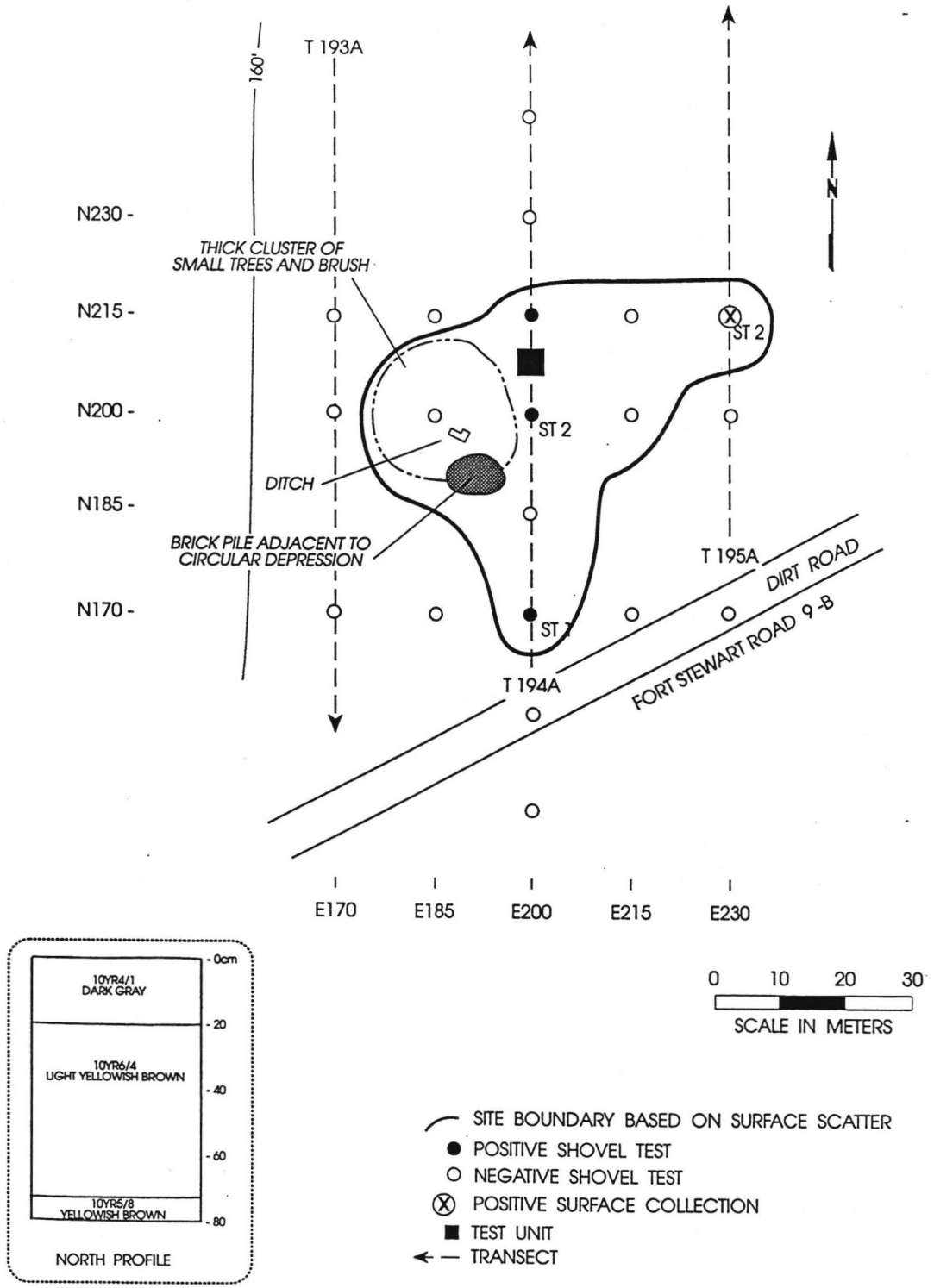


Figure 35. Map of 9LG106 and test unit profile.

A 50 cm test unit was centrally located and excavated to a depth of 80 cm. A total of 20 artifacts were recovered from this unit. These included two undecorated whiteware ceramics, four clear glass fragments, one brass gear, one brass wire, one zinc fragment, and one brick fragment from the 0 to 10 cm level and two aqua glass fragments, three clear glass fragments, three nail fragments, one barbed wire fragment, and one UID iron fragment from the 10 to 20 cm level. The soil profile of the test unit revealed a dark gray (10YR 4/1) sand to 20 cm overlaying 55 cm of a light yellowish brown (10YR 6/4) sand with a variety of mottles. This is followed by 5 cm of yellowish brown (10YR 5/8) sand also mottled. These soils are classified as Blanton sands.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 140 ha owned by Lillian Whitten prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1276). This site also corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25). The site is located on the southeast of the central core of the Shady Grove community.

Sites such as 9LG106 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry (Thomas et al. 1995:203), yet are rarely recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late nineteenth century agricultural units (Campbell 1996:138).

Unfortunately, similar to other sites in the project area which are located at the intersection of extant pre-base roads, 9LG106 has been heavily impacted by military operations. These soils are classified as Blanton loamy sands which typically exhibit three A horizons and may extend to a depth of 1.17 m. The soil profile from the test unit reveals the presence of three horizons to a depth of 50 cm. Although soil colors may suffer from investigator bias due to light and/or soil conditions light yellow soils do not appear in the Blanton series prior to the A22 horizon. This horizon typically contains yellowish brown (10YR 5/6) sand and occurs at a depth of 81 cm below surface. This would suggest that, along with periods of deposition, that a great deal of deflation has occurred at the site.

As found at Taylors Creek (Trinkley et al. 1996:72), the use of foundation stones or brick for support of many turn of the century structures would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG106 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG110

Site 9LG110 is a historic ceramic scatter located due west of Fort Stewart Road 9 approximately 540 m northwest of the intersection of Fort Stewart Roads 9 and 9B (Figure 36). The central UTM coordinates for the site are N3540245 E423600. The site elevation is 29 m AMSL.

The site is situated on a terrace approximately 540 m east of Taylors Creek. Vegetation at the site consists of farm pine and surface visibility is non-existent. The site yielded a total of 23 artifacts.

Site 9LG110 was initially discovered during routine shovel testing (ST1 on T292A) from which a total of four artifacts were recovered. These included two clear glass fragments, one manganese

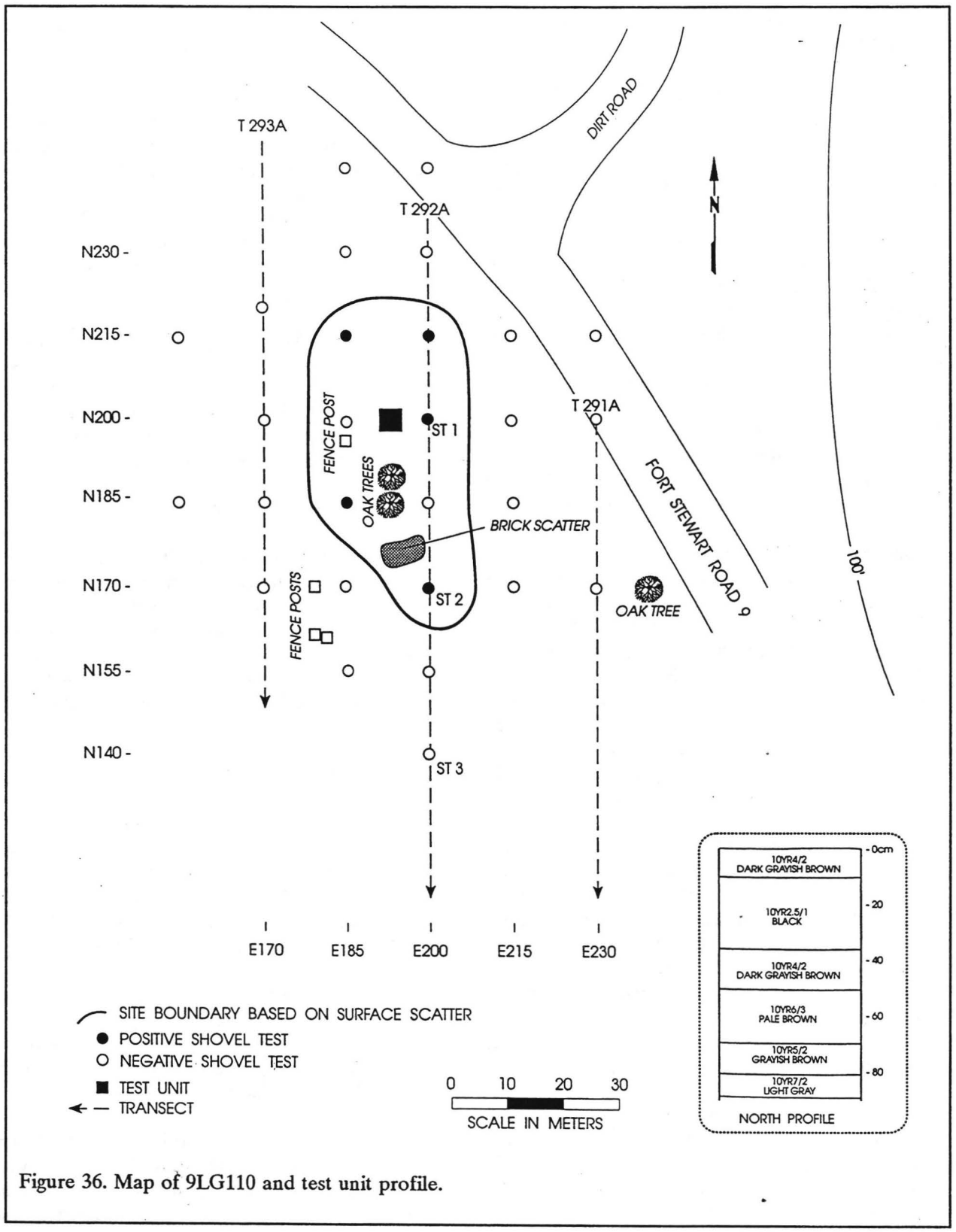


Figure 36. Map of 9LG110 and test unit profile.

glass fragment, and one window glass fragment. An additional 28 shovel tests were excavated at 15 m intervals in cardinal directions from the original positive surface find. Four of these, or 14%, yielded a total of 13 artifacts. These included one fragment of clear glass from N215E200, one fragment of window glass from N215E185, five fragments of roofing tin and one brick fragment from N185E185, and one fragment of clear glass, three fragments of window glass, and one nail fragment from N170E200.

A general surface collection was conducted during subsurface testing which yielded no artifacts. The site dimensions range from a 50 m north-south by 20 m east-west area, or approximately 1,000 m².

A 50 cm test unit was centrally located and excavated to a depth of 90 cm. A total of 6 artifacts were recovered from this unit. These included one milk glass fragment and five nail fragments from the 0 to 10 cm level. The soil profile of the test unit revealed a dark grayish brown (10YR 4/2) sand to 10 cm overlaying 25 cm of black (10YR 2.5/1) sand. This is followed by 15 cm of grayish brown (10YR 4/2) sand over 20 cm of pale brown (10YR 6/3) sand with grayish brown (10YR 5/2) mottles. This overlies 10 cm of grayish brown (10YR 5/2) sand with very dark gray (10YR 3/1) mottles. At the base is 10 cm of light gray (10YR 7/2) sand with brownish yellow (10YR 6/8) mottles. These soils are classified as Stilson loamy sands.

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. Although this collection is similar to that found at other dispersed farmsteads at Fort Stewart, this location lies on the Long and Liberty county line just east of 121 ha owned by Mrs. Janie Bland prior to its sale to the United States government sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 547). This site corresponds with the location of a house site shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map (see Figure 25).

Sites such as 9LG110 are important since they have the potential to yield very important information concerning the presence of small dispersed home sites in the Fort Stewart area. Many of these sites were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late nineteenth and early twentieth century agricultural units (Campbell 1996:138).

Yet, similar to other sites in the project area, 9LG110 has been heavily impacted by military operations. These soils are classified as Stilson loamy sands which normally exhibit two A horizons that extend to 74 cm. The soil profile for the site contains six soil horizons to a depth of 80 cm. This would suggest that the soils at this site have had several periods of deflation and re-deposition.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG110 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG112

Site 8LG112 is a historic ceramic scatter located 180 m west of Fort Stewart Road 9 approximately 690 m northwest of the intersection of Fort Stewart Roads 9 and 9B (Figure 37). The central UTM coordinates for the site are N3540360 E4236280. The site elevation is 29 m AMSL.

The site is situated in a swampy depression

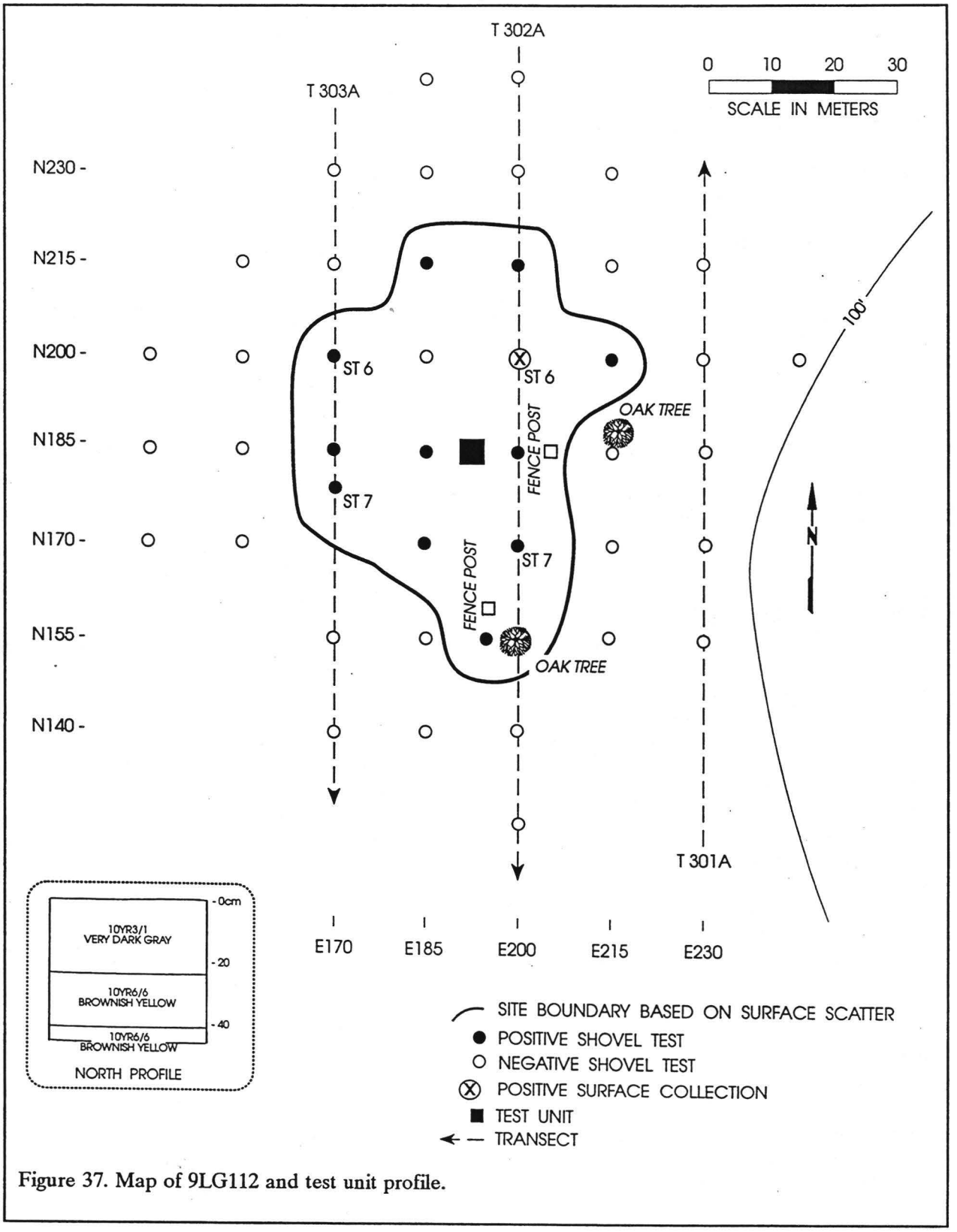


Figure 37. Map of 9LG112 and test unit profile.

approximately 150 m south of Taylors Creek. Vegetation at the site consists of farm pine and cypress resulting in limited visibility. The site yielded a total of 83 artifacts.

Site 9LG112 was initially discovered from surface finds during routine shovel testing. A total of 43 shovel tests were excavated at 15 m intervals in cardinal directions from the initial surface location (ST6 on T302A). Eleven of these, or 26%, yielded a total of 72 artifacts. These included undecorated whiteware, stoneware, aqua glass, blue glass, clear glass, light green glass, manganese glass, milk glass, nail fragments, and brick (Table 10).

A general surface collection was conducted during subsurface testing. This yielded a total of three artifacts. These included two fragments of clear glass, and one fragment of milk glass. Artifacts were collected from a 65 m north-south by 50 m east-west area, or approximately 3,250 m².

A 50 cm test unit was centrally located and excavated to a depth of 45 cm. A total of eight artifacts were recovered from this unit. These included one aqua glass fragment, three clear glass fragments, and one brick fragment from the 0 to 10 cm level and one clear glass fragment and two nail fragments from the 20 to 30 cm level. The soil profile of the test unit revealed a very dark grayish (10YR 3/1) sand to 25 cm overlaying 15 cm of brownish yellow (10YR 6/6) sand. This is followed by 5 cm of brownish yellow (10YR 6/6) sand. These soils are classified as Stilson loamy sands.

Table 10.
Artifacts Recovered from Sub-surface Collections at 9LG112

Unit	Count	Description
N215E200	1	Glass, manganese
N215E185	1	Glass, light green
	8	Glass, clear
	2	Glass, manganese
	1	Glass, milk
	1	Glass, window
	7	Nail, fragments
N200E215	2	Glass, clear
	1	Glass, window
	1	Brick, fragment
N200E170	1	Whiteware, undecorated
	1	Stoneware
	1	Glass, blue
	1	Glass, clear
	2	Nail, fragments
N185E200	1	Glass, clear
	4	Nail, fragments
N185E185	1	Stoneware
	1	Glass, milk
N185E170	1	Glass, aqua
	1	Glass, manganese
	4	Nail, fragments
N178E170	1	Stoneware
	4	Glass, manganese
	2	Glass, window
N170E200	14	Nail, fragments
	1	Tin, fragment
	1	Shell, shotgun base
N170E185	1	Glass, light green
	1	Glass, clear
N155E195	3	Nail, fragments
TU 00-10 cm	1	Glass, aqua
	3	Glass, clear
	1	Brick, fragment
TU 20-30 cm	1	Glass, clear
	2	Nail, fragments

The artifacts recovered during testing would indicate the presence of a historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location lies on 121 ha owned by Mrs. Janie Bland prior to its sale to the United States government sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 547). This site corresponds with the location of a house site shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map (see Figure 25).

Sites such as 9LG112 are important since they have the potential to yield information concerning the presence of dispersed settlements in the Fort Stewart area. Many of these home sites were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late nineteenth and early twentieth

century agricultural units (Campbell et al. 1996:138).

Similar to other sites in the project area, 9LG112 has been heavily impacted by military operations. These soils are classified as Stilson loamy sands which have been previously described. The soil profile for the site would suggest that the soils have had several periods of deflation and re-deposition.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG112 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG114

Site 9LG114 is a historic ceramic scatter located on the south side of a firebreak road approximately 240 m south of Fort Stewart Road 6 and about 840 m northeast of the intersection of Fort Stewart Roads 5 and 6 (Figure 38). The central UTM coordinates for the site are N3541140 E421340. The site elevation is 41 m AMSL.

The site is situated on a ridge nose along an oak lined firebreak road approximately 450 m north of a portion of the Taylors Creek drainage. Vegetation at the site consists sparse grass. Surface visibility is approximately 40%. The site yielded a total of 72 artifacts. The site was initially discovered from surface finds during routine shovel testing. A total of 39 shovel tests were excavated at 15 m intervals in cardinal directions from the initial surface find (ST1 on T370A). Eight of these, or 21%, yielded a total of 31 artifacts (Table 11). These included undecorated whiteware, stoneware, glass (aqua, clear, milk, window, blue, manganese), as well as nail, tin, and brick fragments.

Table 11.
Artifacts Recovered from Sub-surface Collections at 9LG114

Unit	Count	Description
N230E140	1	Nail, wire cut
N200E200	3	Whiteware, undecorated
	1	Iron link
N200E185	1	Glass, light green
	1	Glass, clear
	2	Nail, fragments
N200E170	2	Creamware, undecorated
	1	Nail, wire cut
	1	Crown cap
N200E155	1	Whiteware, undecorated
	1	Glass, brown
	3	Glass, clear
	1	Nail, fragment
N200E125	1	Glass, clear
N197E137	5	Glass, blue
N185E185	2	Glass, aqua
	4	Glass, clear

A general surface collection, which produced 41 artifacts, was conducted during subsurface testing. These included 10 undecorated whiteware ceramics, one yellowware ceramic, three stoneware ceramics, 12 fragments of aqua glass, five fragments of clear glass, two fragments of green glass, three fragments of light green glass, three fragments of manganese glass, one fragment of window glass, and one oyster shell fragment. The site dimensions range from a 65 m north-south by 50 m east-west area, or approximately 3,250 m^2.

A 50 cm test unit was centrally located and excavated to a depth of 45 cm. A total of eight artifacts were recovered from this unit. These included one aqua glass fragment, three clear glass fragments, and one brick fragments from the 0 to 10 cm level and one clear glass fragment and two nail fragments from the 20 to 30 cm level. The soil profile of the test unit revealed a very dark grayish (10YR 3/1) sand to 25 cm overlaying 15 cm

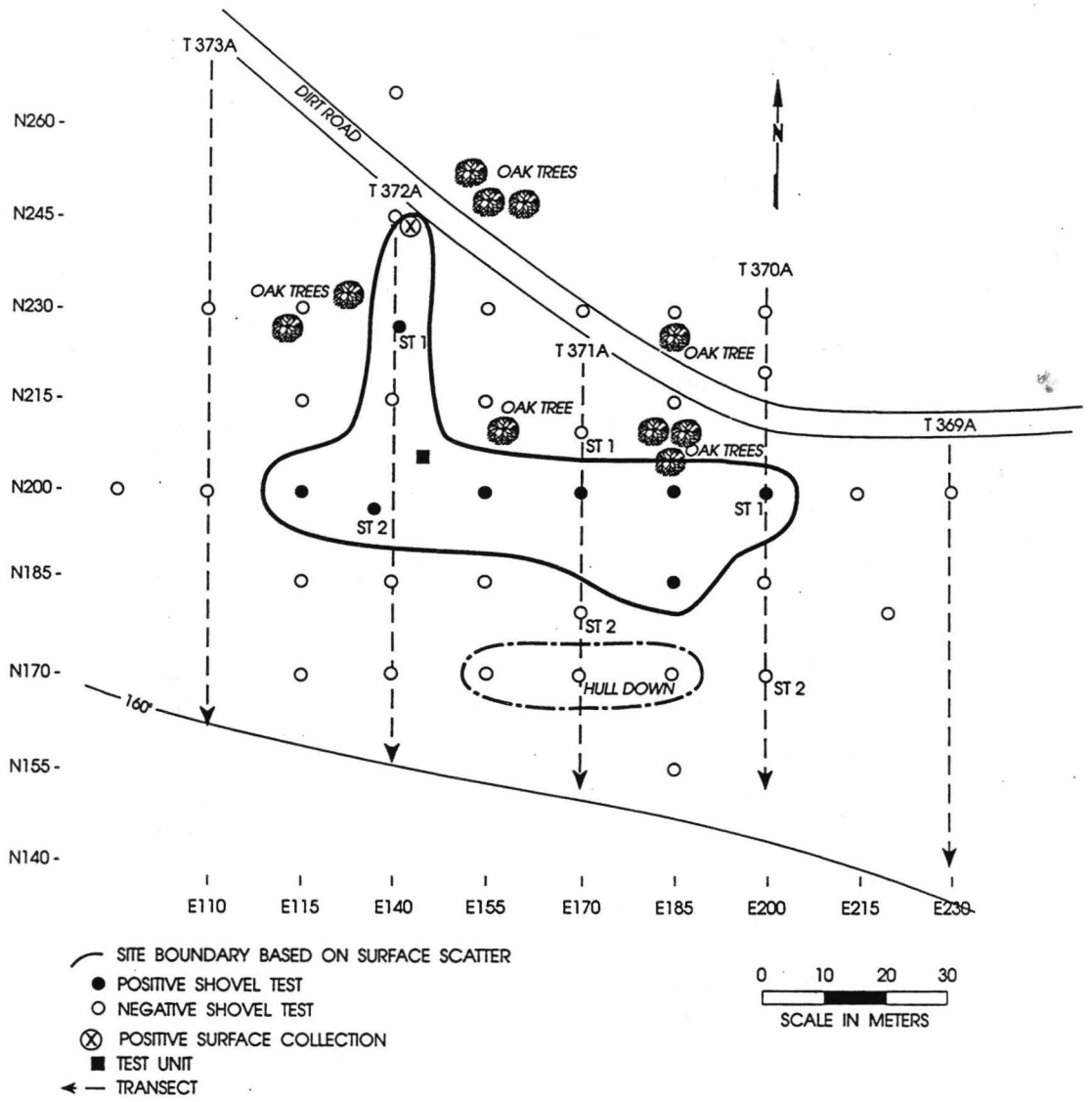


Figure 38. Map of 9LG114 and test unit profile.

of brownish yellow (10YR 6/6) sand. This is followed by 5 cm of brownish yellow (10YR 6/6) sand. These soils are classified as Fuquay loamy sands.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1780 to 1900. Although this collection is similar to that found at other dispersed farmsteads at Fort Stewart, this location corresponds with 279 ha owned by Wilton Banks prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1496). The property is located northeast of the central core of the Shady Grove community.

Sites such as 9LG114 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry. Thomas et al. (1995:203) mention that although these sites should be present in the archaeological record, quite often they have been missed by investigators. As well, there appears to be a very limited data base for mid- to late nineteenth and early twentieth century agricultural units (Campbell et al. 1996:138).

Similar to other sites in the project area, 9LG114 has been heavily impacted from military operations. These soils are classified as Fuquay loamy fine sands and have been described previously. The soil profile for the site would suggest that the soils have had several periods of deflation and re-deposition.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG114 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG117

Site 9LG117 is a historic ceramic scatter located 110 m west of Fort Stewart Road 5 approximately 300 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 39). The central UTM coordinates for the site are N3539140 E419820. The site elevation is 47 m AMSL.

The site is situated on a terrace approximately 540 m west of the Taylors Creek drainage and 50 m south of a plowed food plot. Vegetation at the site consists sparse grass, farm pine, and scrub oak understory resulting in surface visibility being limited to about 25%. The site yielded a total of 50 artifacts.

Site 9LG117 was initially discovered during routine shovel testing (ST16 on T407A) from which one undecorated whiteware ceramic, six aqua glass fragments, one brown glass fragment, four clear glass fragments, two milk glass fragments, one iron can fragment, and one zinc fragment were recovered. An additional 30 shovel tests were excavated at 15 m intervals in cardinal directions from the initial surface find. Five of these, or 17%, yielded a total of 28 artifacts (Table 12). These included undecorated whiteware, glass (aqua, brown, clear, milk, window, blue, manganese), as well as nail, iron, fragments and a suspender ring.

A general surface collection, which produced three artifacts, was conducted during subsurface testing. These included one fragment each of undecorated whiteware ceramic, aqua glass, and clear glass. The site dimensions range from a 65 m north-south by 35 m east-west area, or approximately 2,275 m^2.

A 50 cm test unit was centrally located and excavated to a depth of 50 cm. A total of three

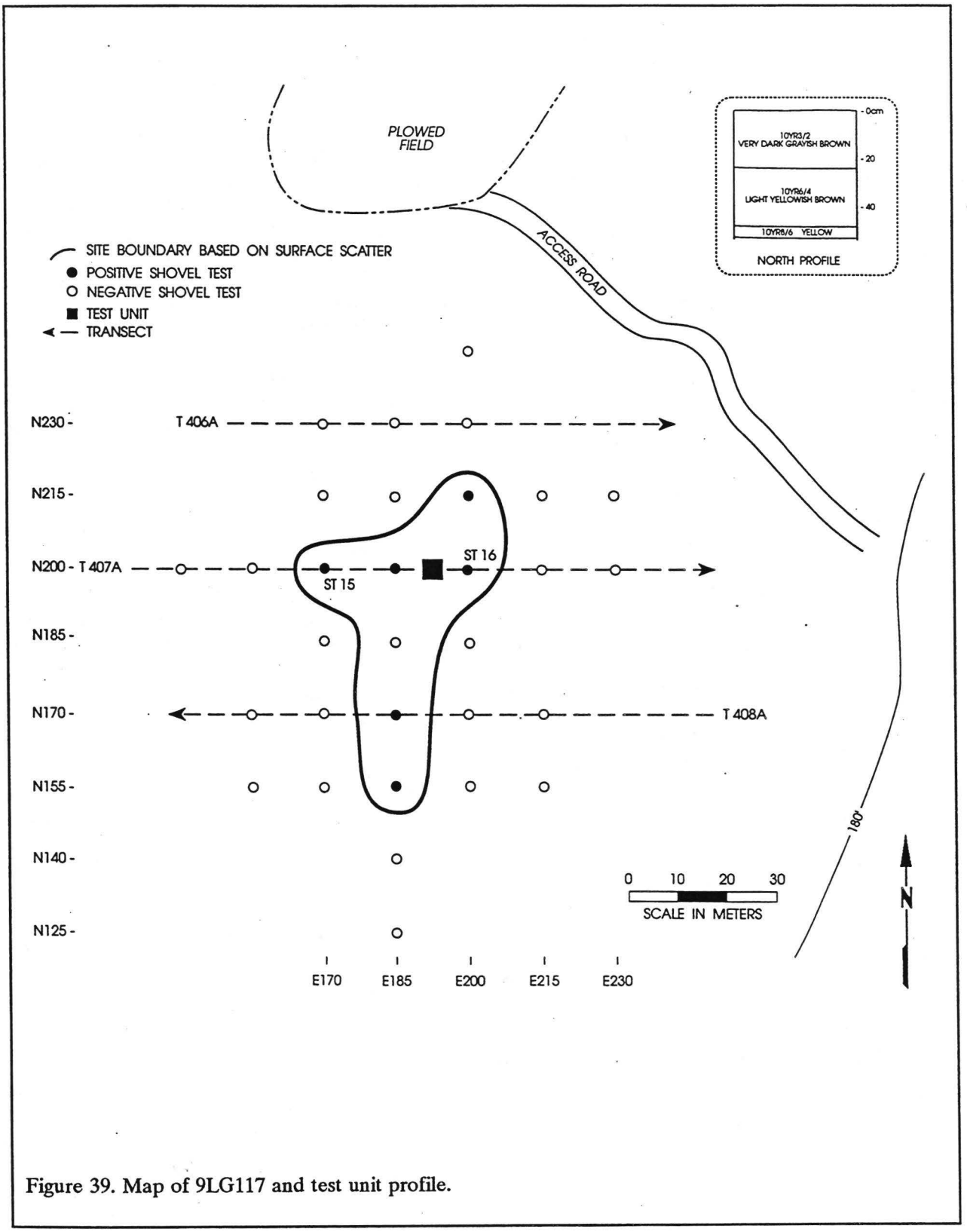


Figure 39. Map of 9LG117 and test unit profile.

Table 12.
Artifacts Recovered from Sub-surface Collections at 9LG117

Unit	Count	Description
N215E200	1	Whiteware, undecorated
	1	Nail, wire cut
N200E200	1	Whiteware, undecorated
	1	Glass, brown
	6	Glass, aqua
	4	Glass, clear
	2	Glass, milk
	2	Iron can, fragment
	1	Zinc, fragment
N200E185	2	Whiteware, undecorated
	2	Glass, green
	2	Glass, light green
	3	Glass, aqua
	1	Glass, blue
	5	Glass, clear
	2	Glass, manganese
	1	Button, suspender
	1	Nail, wire cut
	1	Ring, iron
N200E170	1	Glass, clear
	2	Nail, fragment
N170E185	1	Glass, clear
N155E185	1	Glass, clear
TU 00-10	2	Glass, aqua
	1	Glass, clear

artifacts were recovered from this unit. These included two aqua glass fragments and one clear glass fragment from the 0 to 10 cm level. The soil profile of the test unit revealed a very dark grayish (10YR 3/2) sand to 23 cm overlaying 24 cm of light yellowish brown (10YR 6/4) sand. This is followed by 3 cm of yellow (10YR 8/6) sand with very pale brown (10YR 8/4) mottles. These soils are classified as Blanton sands.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with 39 ha owned by Reamer Hendricks prior to its sale to the United States government sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 634). This site does not correspond with the location of any house sites shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map.

Sites such as 9LG117 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late nineteenth and early twentieth century agricultural units (Campbell et al. 1996:138).

Unfortunately, similar to other sites in the project area, 9LG117 has been heavily impacted by military operations. These soils are classified as Blanton loamy fine sands which have been described previously. The soil profile for the site would suggest that the soils have had several periods of deflation and re-deposition.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG117 is recommended as not eligible for inclusion on the National Register of Historic Places.

9TT142

Site 9TT142 is a multicomponent prehistoric lithic and historic ceramic scatter located at the northern end of the Slades Branch approximately 450 m east of New Bethel Church and 870 m northwest of the intersection of Fort Stewart Roads 5 and 9B (Figure 40). The central

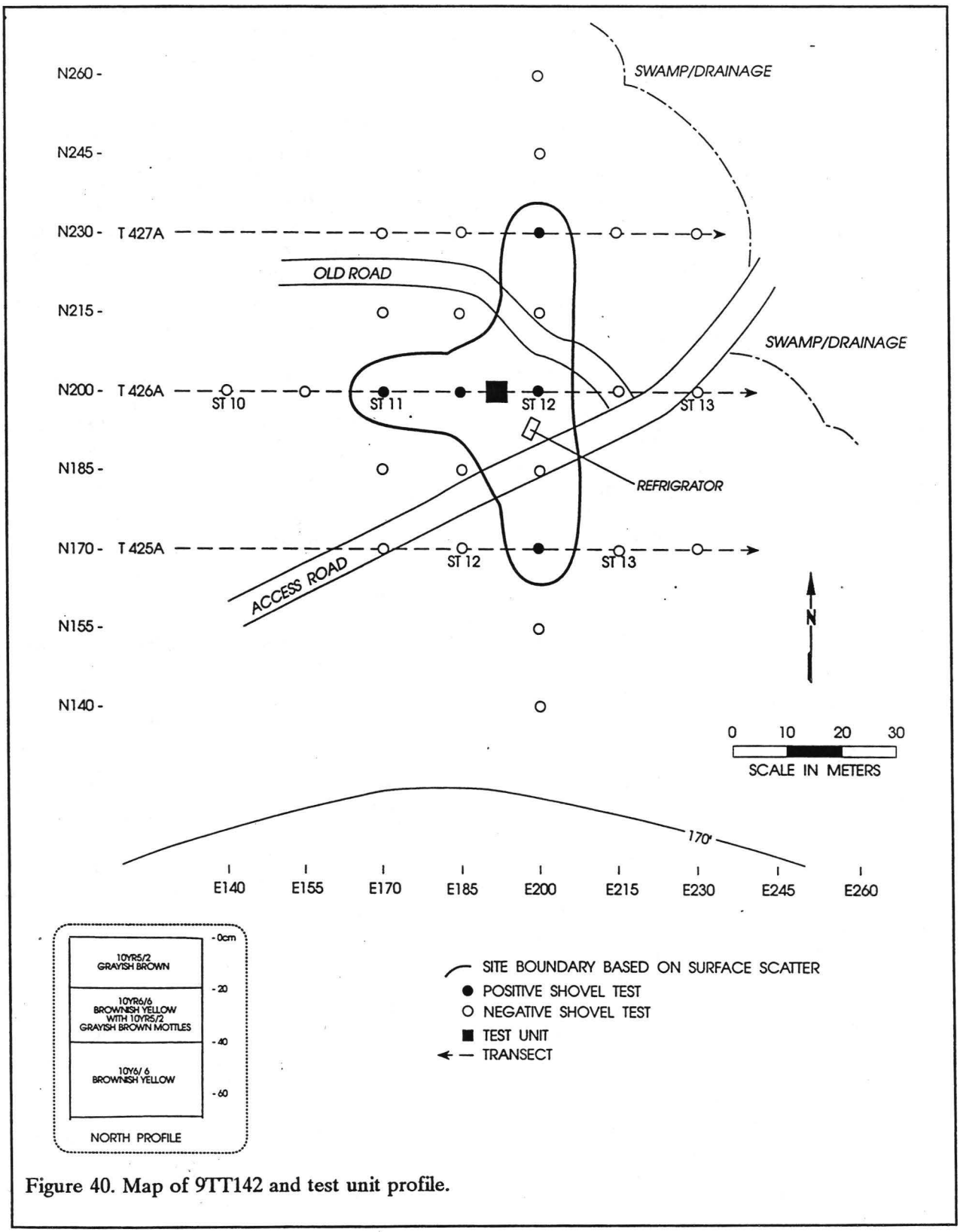


Figure 40. Map of 9TT142 and test unit profile.

UTM coordinates for the site are N3539300 E419180. The site elevation is 52 m AMSL.

The site, situated on a ridge slope approximately 30 m west of the Slades Branch drainage, is bisected by firebreak roads to the north and south. Vegetation at the site consists of mixed farm pine and hardwoods with a scrub oak understory. Surface visibility is non-existent. The site produced a total of 13 artifacts.

Site 9TT142 was initially discovered during routine shovel testing (ST12 on T426A) from which one wire cut nail was recovered. An additional 26 shovel tests were excavated at 15 m intervals in cardinal directions from the initial positive shovel test. Four of these, or 15%, yielded a total of nine artifacts. These included one chert flake from N230E200, Three undecorated whiteware ceramics, one green edged white porcelain ceramic, two fragments of clear glass, and one nail fragment from N200E185, two undecorated whiteware ceramics from N200E170, and one Savannah Plain sherd from N170E200.

A general surface collection was conducted during subsurface testing and no artifacts were collected. The site dimensions are 60 m north-south by 45 m east-west area, or approximately 2,700 m².

A 50 cm test unit was centrally located and excavated to a depth of 70 cm. A total of three artifacts were recovered from this unit which included one clear glass fragments from the 0 to 10 cm level, one nail fragment from the 20 to 30 cm level, and one chert flake from the 40 to 50 cm level. The soil profile of the test unit revealed a grayish brown (10YR 5/2) sand to 20 cm overlaying 20 cm of brownish yellow (10YR 6/6) sand with grayish brown (10YR 5/2) mottles. This is followed by 30 cm of brownish yellow (10YR 6/6) sand. These soils are classified as Leefield loamy sands.

The artifacts recovered during testing would indicate the presence of a multi-component prehistoric and historic site. The prehistoric component dates to a Mississippian occupation. The historic component spans the mid-nineteenth to early twentieth century and the mean ceramic date range for this component is 1813 to 1900. The historic collection is similar to that found at other dispersed farmsteads at Fort Stewart. This location corresponds with approximately 56 ha, owned by Clifford C. Cox prior to its sale to the United States government sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1485). This site also corresponds with the location of a house site shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map (see Figure 25). The property is located southwest of the central core of the Shady Grove community.

Sites such as 9TT142 are important since they have the potential to yield information concerning the presence of prehistoric activities areas, as well as small historic dispersed settlements in the Fort Stewart area. Quite often prehistoric sites are located on swamp margins. Many of the historic communities were associated with the timber/naval stores industry (Thomas et al. 1995:203). There is very limited data for either of these types of sites.

Unfortunately, similar to other sites in the project area, 9TT142 seems to be heavily impacted by military operations. These soils are classified as Leefield loamy sands which normally exhibit two A horizons to 65 cm below surface. The soil profile for the site contains two A horizons which extend to a depth of 40 cm. This is followed by 10 cm of a B horizon which is typically seen at depths of 65 cm or deeper in the Leefield series. This suggests that the soils at this site, possibly through erosion due to its location, have become deflated.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can

provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9TT142 is recommended as not eligible for inclusion on the National Register of Historic Places.

9TT143

Site 9TT143 is a historic ceramic scatter located due west of Fort Stewart Road 5 and 1,230 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 41). The central UTM coordinates for the site are N3540000 E420080. The site elevation is 49 m AMSL.

The site, situated on a ridge slope approximately 30 m west of the Slades Branch drainage, is bisected by firebreak roads to the north and south. Vegetation at the site consists of mixed farm pine and hardwoods with a scrub oak understory. Surface visibility is non-existent. The site yielded 111 artifacts.

Site 9TT143 was initially discovered from surface finds during routine shovel testing (ST2 on T378A). Sixty-two shovel tests were excavated at 15 m intervals in cardinal directions from the initial surface find. Fourteen of these, or 23%, yielded a total of 74 artifacts (Table 13). These include undecorated whiteware, undecorated creamware, annular yellowware, a porcelain doll arm fragment, glass (aqua, clear, manganese, milk, window, light green), brick fragments, metal items, and nails.

A general surface collection, which produced 37 artifacts, was conducted during subsurface testing. These included 10 undecorated whiteware ceramics, two annular yellowware ceramics, one undecorated creamware ceramic, two stoneware ceramics, four fragments of aqua glass, five fragments of clear glass, four fragments of manganese glass, two nail fragments, one horseshoe, one unidentified iron fragment, one oyster shell, one porcelain doll arm fragment, and three brick fragments. The site dimensions range from a 90 m north-south by 110 m east-west area, or approximately 9,900 m².

Table 13.
Artifacts Recovered from Sub-surface Collections at 9TT143

Unit	Count	Description
N245E200	1	Whiteware, undecorated
N230E215	1	Glass, window
N230E200	1	Whiteware, undecorated
	1	Glass, aqua
	1	Glass, clear
	1	Glass, manganese
	20	Iron can, fragments
	1	Brick, fragment
N215E215	5	Glass, clear
	1	Nail, wire cut
	1	Brick, fragment
N215E200	1	Whiteware, undecorated
	3	Glass, clear
	3	Glass, milk
	8	Brick, fragments
N215E170	1	Glass, manganese
N215E140	6	Oyster shell, fragments
N200E170	2	Glass, clear
N185E230	1	Glass, clear
	1	Bolt, fragment
N185E185	1	Whiteware, undecorated
N185E170	1	Glass, manganese
N170E215	5	Nail, fragments
N170E200	1	Glass, light green
	1	Glass, clear
	2	Brick, fragment
N155E215	3	Glass, brown

A 50 cm test unit was centrally located and excavated to a depth of 75 cm. No artifacts were recovered from this unit. The soil profile of the test unit revealed a single layer of very pale brown (10YR 8/4) sand with dark gray (10YR 4/1) mottles. These soils are classified as Albany loamy fine sands.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the late eighteenth to early twentieth centuries. The mean ceramic date range for the site is 1780 to 1900. Although this collection is similar to that found at other dispersed farmsteads at Fort Stewart, this location corresponds with 16 ha owned by Nancy Williams prior to its sale to the United States government sometime in the 1940s (Savannah District, Corps of

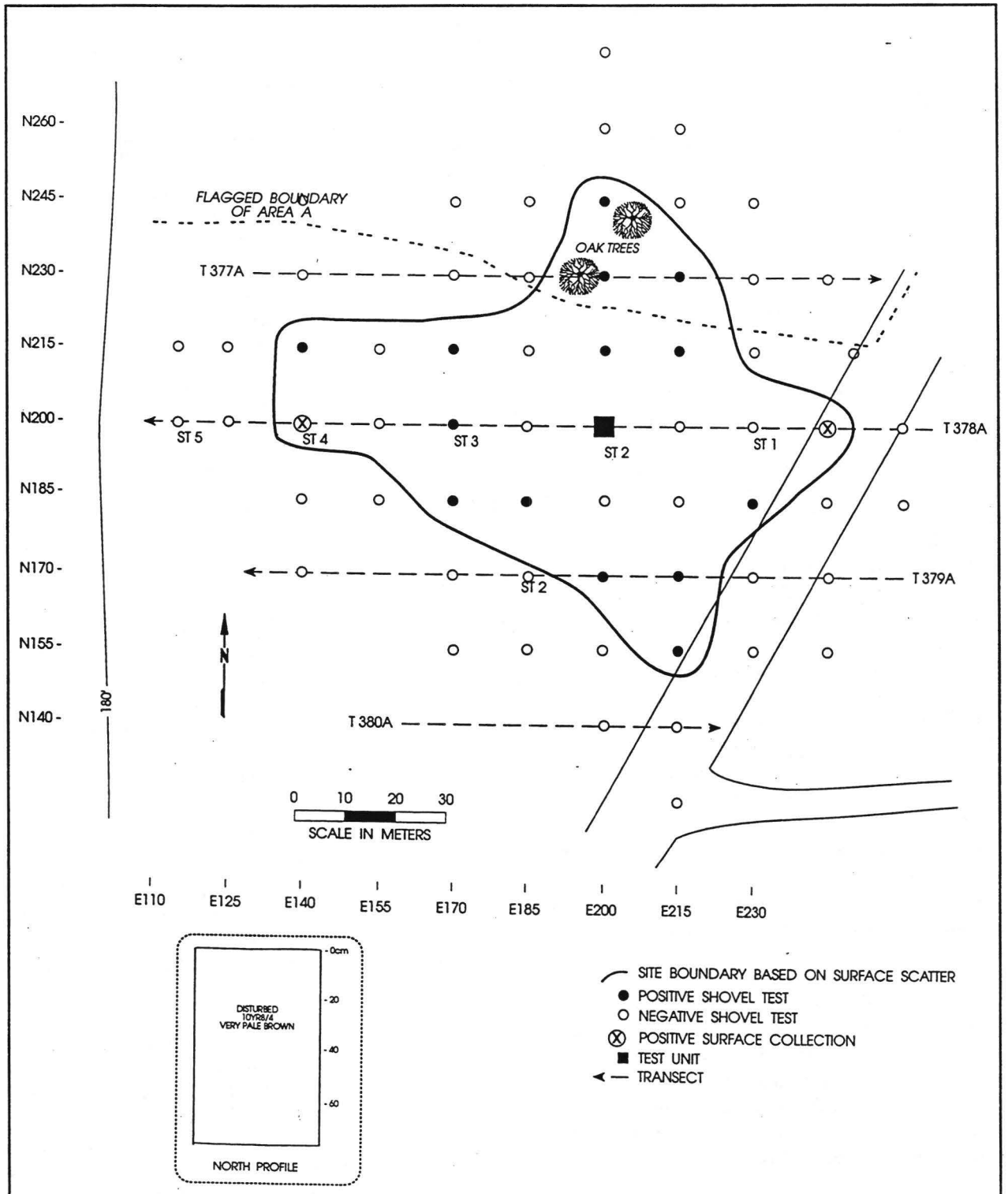


Figure 41. Map of 9TT143 and test unit profile.

Engineers, Drawing Number 4860-14, Tract 1502). Although this site does not correspond with the location of any house sites shown on the 1920 U.S. Corps of Engineers Glennville quadrangle map is in very close proximity to the location designated as the Shady Grove school (see Figure 25). The property is located just west of the central core of the Shady Grove community.

Sites such as 9TT143 are important since they have the potential to yield information concerning the presence of small communities in the Fort Stewart area. Many of these communities were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid to late nineteenth and early twentieth century agricultural units (Campbell 1996:138).

Similar to other sites in the project area, 9TT143 has been heavily impacted from military operations. These soils are classified as Albany loamy fine sands which have been previously discussed. The soil profile contains only one horizons to a depth of 75 cm. This would suggest that the soils have had several periods of deflation and re-deposition which would cause substantial mixing.

The use of foundation stones or brick for support of many turn of the century structures located on Fort Stewart would likely decrease the chances of any sub-surface features being present (Trinkley et al. 1996:72). No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address issues presented by Campbell et al. (1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9TT143 is recommended as not eligible for inclusion on the National Register of Historic Places.

Previously Recorded Sites in Survey Tract "B"

9LG47

Site 9LG47 was reported as a historic ceramic scatter located on the northeastern corner of the intersection of Fort Stewart Roads 33B and 4 (Figure 42). The UTM coordinates were recorded as N3537738 E420747. The site elevation was recorded as 48 m AMSL.

The site was originally identified by Chicora Research Archaeologist William B. Barr in September, 1996. A total of ten artifacts were recovered including one blue edged pearlware, two undecorated whiteware, one delcomania whiteware, one gray salt glazed stoneware, three fragments of clear glass, one light green molded glass, and one fragment of manganese glass. No subsurface testing was performed and the site status was recommended as potentially eligible.

The Chicora Foundation relocated this site during the present survey. Site 9LG47 is a historic ceramic scatter located on the northeast corner of the intersection of Fort Stewart roads 33B and 4. The corrected cdntral UTM coordinates for the site are N3537395 E420720. The site elevation is 44 m AMSL.

The site is situated on a terrace and vegetation at the site consists of sparse grass and numerous oak trees resulting in surface visibility of about 40%. The site yielded a total of 64 artifacts.

Site 9LG47 was initially relocated from surface finds during routine shovel testing (ST45 on T69). Forty-six shovel tests were excavated at 15 m intervals in cardinal directions from the original positive location. Twelve, or 26%, of these yielded a total of 37 artifacts (Table 14). These included undecorated whiteware, glass (light green, milk, clear, aqua, manganese), along with nails and nail fragments.

A general surface collection was conducted during subsurface testing. The surface collection yielded a total of 27 artifacts. Artifacts included eight undecorated whiteware ceramics, one sponge decorated whiteware ceramic, one

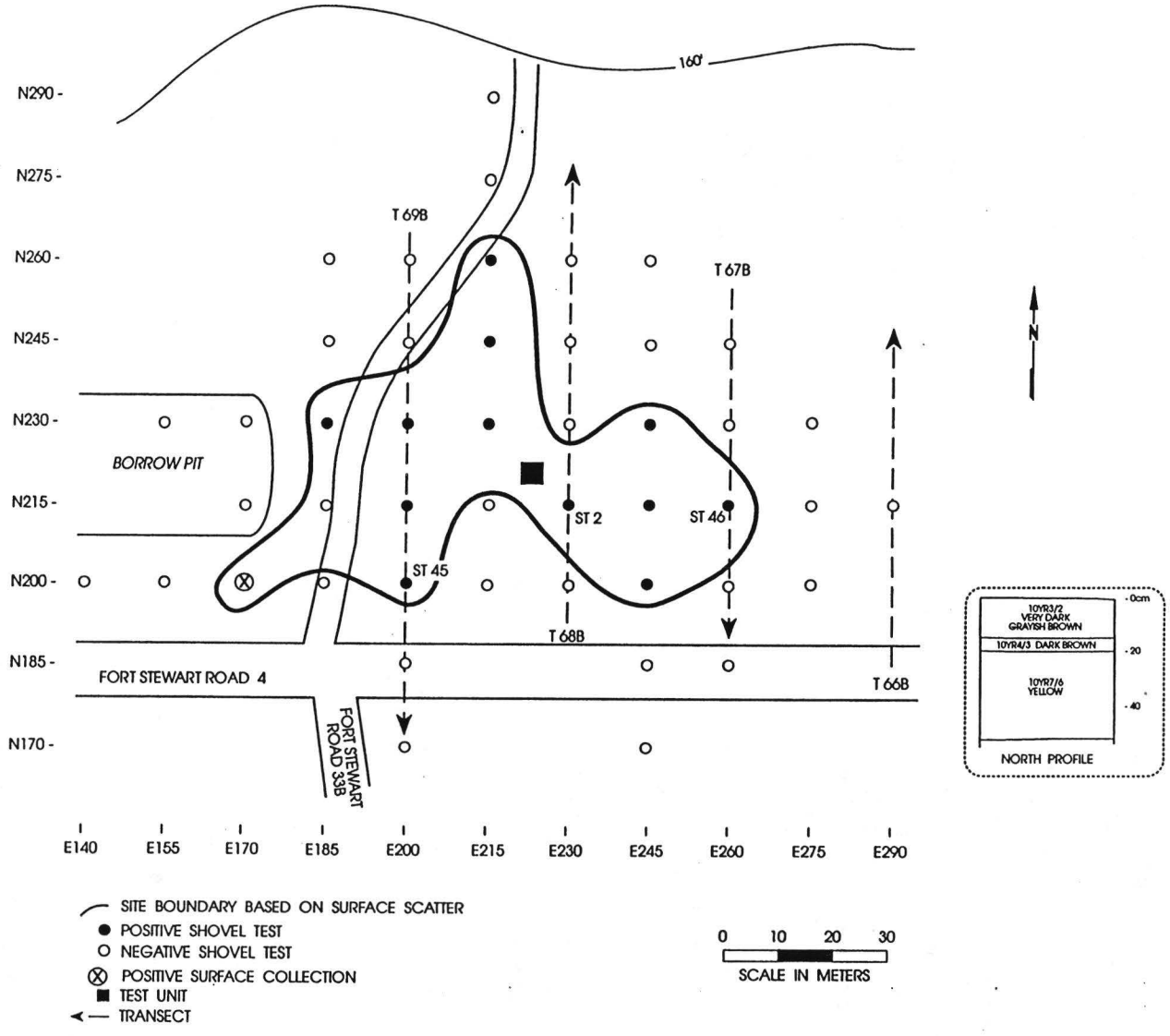


Figure 42. Map of 9LG47 and test unit profile.

Table 14.
Artifacts Recovered from Sub-surface Collections at 9LG47

Unit	Count	Description
N260E215	1	Nail, fragment
N245E215	1	Whiteware, undecorated
N230E245	1	Glass, light green
N230E215	1	Nail, wire cut
N230E200	1	Glass, clear
N230E185	2	Nail, fragment
N215E260	1	Glass, milk
	1	Glass, clear
	2	Nails, wire cut
	1	Iron, fragment
N215E245	2	Glass, clear
	2	Nail, fragments
N215E230	1	Whiteware, undecorated
	1	Glass, aqua
	6	Glass, clear
	2	Glass, manganese
	1	Nail, wire cut
	1	Nail, fragment
	1	Iron strap, fragment
N215E200	1	Glass, manganese
	3	Nail, fragments
N200E245	1	Whiteware, undecorated
	1	Nail, fragment
N200E200	1	Nail, wire cut
N200E170	1	Whiteware, undecorated

stoneware ceramic, six fragments of aqua glass, one fragment of black glass, one fragment of blue glass, five fragments of clear glass, three fragments of manganese glass, and one unidentifiable brass fragment. Artifacts were collected in a 65 mnorth-south by 90 m east-west area, covering approximately 5,850 m².

A 50 cm test unit was centrally located within the site boundaries and excavated to a depth of 50 cm. No artifacts were recovered from this unit. The soil profile of the test unit revealed a very dark grayish brown (10YR 3/2) sand to 15 cm overlaying 5 cm of a dark brown (10YR 4/3) sand. This is followed by 30 cm of yellow (10YR 7/6) sand. The soils from this site are identified as Mascotte fine sands.

The artifacts recovered during the previous surface survey and current testing suggest a domestic site originating sometime in the early nineteenth century (pearlware) through the second quarter of the twentieth century (decalcomania whiteware). The mean ceramic date range for the site is 1780 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 333 ha owned by Lillian Whitten prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 1275). This site also corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25). The site is located southeast of the central core of the Shady Grove community.

Sites such as 9LG47 are important since they have the potential to yield information concerning the presence of small dispersed settlements in the Fort Stewart area. Many of these farmsteads were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered in archaeological investigations. As well, there appears to be a very limited data base for mid- to late nineteenth century agricultural units (Campbell et al. 1996:138).

Similar to other sites in the project area the southern and western portion of 9LG47 exhibits evidence of impacts from military operations and the construction of a borrow pit. Deflation and soil disturbance is evident when the site's soils are compared to the typical Mascotte series soils typically have a profile which contains an A horizon to 15 cm and a multiple B horizon which extends to 53 cm in depth. The soil stratigraphy from the test unit would indicate that approximately 20 cm of soil has been removed from the surface of the site. Compounding this problem is the probable use of foundation stones or brick for support of many turn of the century structures. Trinkley et al. (1996:72) report that this would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

Unfortunately, this site does not appear to possess either the data sets, or integrity, necessary to address these issues (Campbell et al. 1996:214-

230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG47 is recommended as not eligible for inclusion on the National Register of Historic Places.

Newly Recorded Sites in Survey Tract "B"

9LG120

Site 9LG120 is a historic ceramic scatter located on the southeast corner of the intersection of Fort Stewart Roads 4 and 33 (Figure 43). The central UTM coordinates for the site are N3537880 E423740. The site elevation is 34 m AMSL.

The site is situated on a terrace approximately 480 m southwest of the Taylors Creek drainage. Vegetation at the site consists of mixed farm pine and hardwoods, although surface visibility is as high as about 70%. This site yielded a total of 42 artifacts.

Site 9LG120 was initially discovered during routine shovel testing (ST2 on T198B) with the recovery of one undecorated whiteware ceramic and one manganese glass fragment. An additional 15 shovel tests were excavated at 15 m intervals in cardinal directions from the initial positive shovel test. Two of these, or 13%, yielded a total of eight additional artifacts. These included two undecorated whiteware ceramics, one fragment of a "Herty" turpentine cup, one fragment of brown glass, and one iron caster arm from N230E200 and one fragment of clear glass and two manganese glass fragments from N215E215.

A general surface collection was conducted during subsurface testing. A total of 32 artifacts were collected. These included 16 undecorated whiteware ceramics, one flow blue transfer print whiteware ceramic, one white porcelain ceramic, two stoneware ceramics, two aqua glass fragments, four light green glass fragments, one blue glass fragment, two clear glass fragments, two manganese glass fragments, and one unidentified iron fragment. The site dimensions are about 30 m north-south by 15 m east-west area, covering 450 m^2.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the mid-nineteenth to early twentieth century. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 12 ha owned by Mrs. J.I. Branch prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 296). This site does not corresponds with any house site location shown on the 1920 USGS Glennville quadrangle map.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the mid-nineteenth to early twentieth centuries. This collection is similar to that found at other dispersed farmsteads within the project area which would indicate that the site possibly functioned as a farmstead and may have been occupied by tenant labor. Whiteware and stoneware, recovered during testing, are frequently associated with tenant sites throughout Georgia and the Carolinas. The presence of a turpentine collection pot fragment may indicate one aspect of the farm's overall production.

Such sites as 9LG120 are important since they have the potential to yield information concerning the presence of small dispersed settlements in the Fort Stewart area. Many of these farmsteads were associated with the timber/naval stores industry (Thomas et al. 1995:203) yet rarely are they recovered by investigators. As well, there appears to be a very limited data base for mid to late nineteenth century agricultural units (Campbell et al. 1996:138).

Similar to other sites in the project area 9LG120 has been heavily impacted from military operations. A level line was run for 26 m across the main portion of the site from tree base to tree base (Figure 44). The resulting profile dramatically reveals the deflation of the soils, approximately one meter in depth, through the

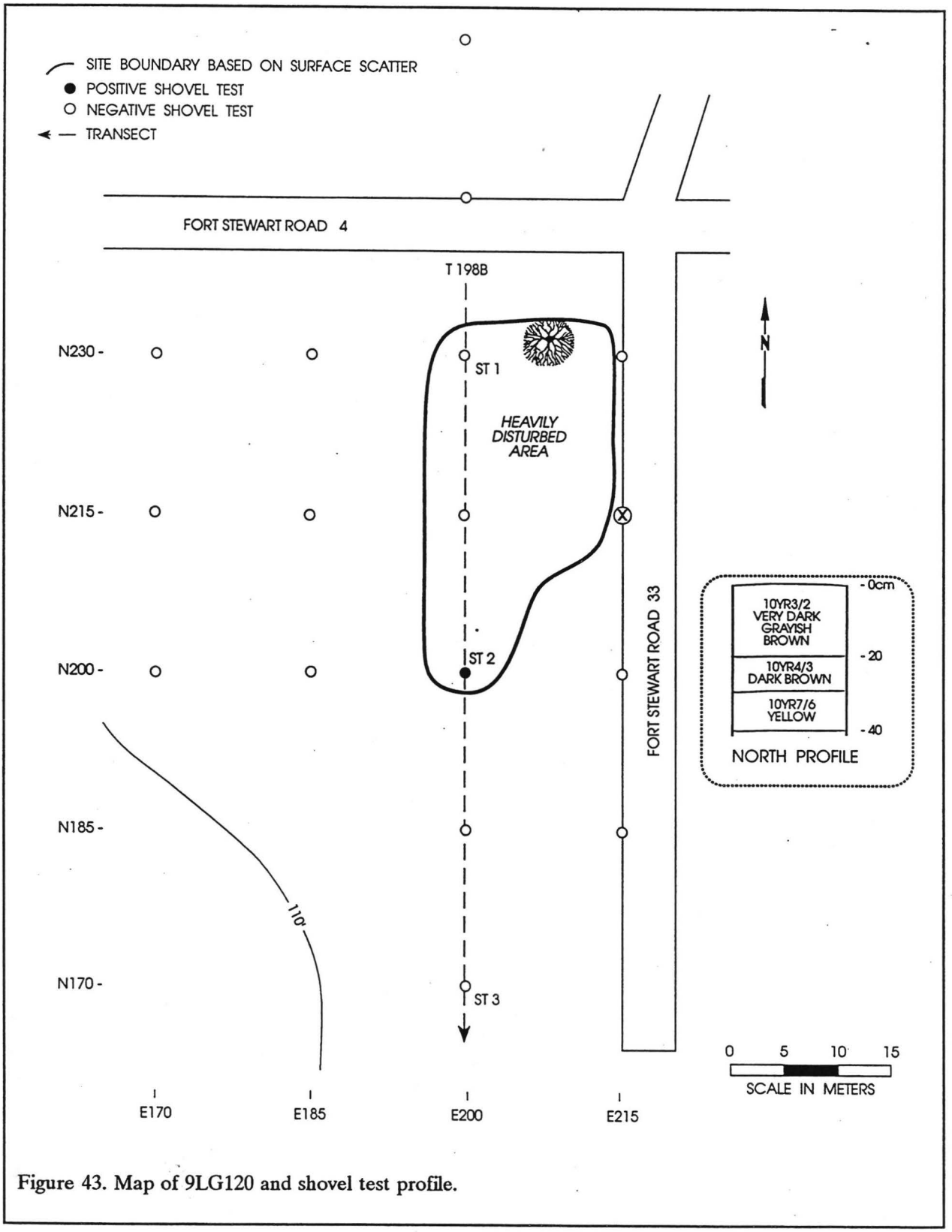


Figure 43. Map of 9LG120 and shovel test profile.

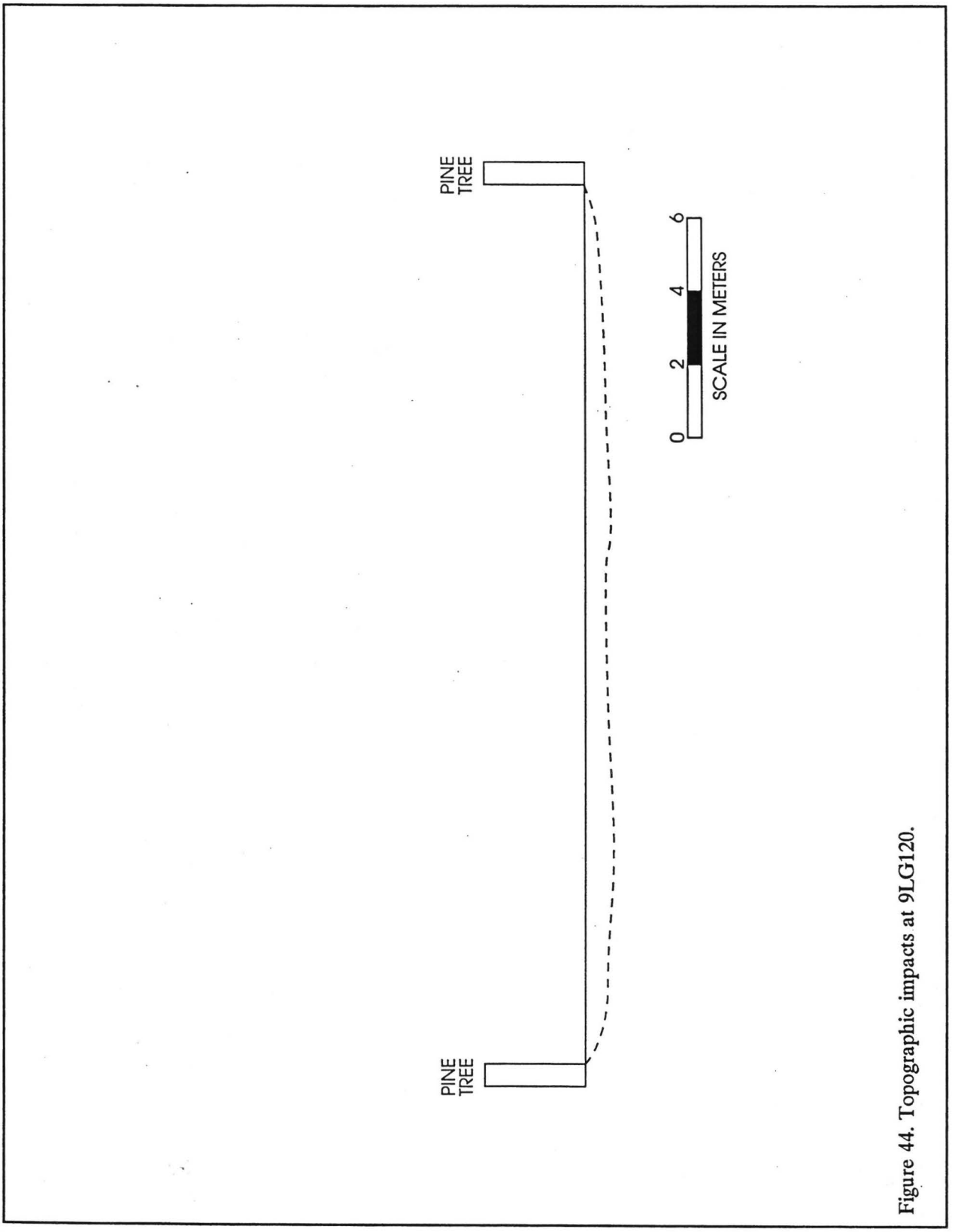


Figure 44. Topographic impacts at 9LG120.

central core of the site. Although no 50 cm test unit was excavated due to this severe disturbance the soil profile from ST1 on T198B suggests severe soil disturbance. The soil profile revealed 20 cm of very dark grayish brown (10YR 3/2) sand overlying 10 cm of dark brown (10YR 4/3) sand. This is followed by 10 cm of yellow (10YR 7/6) sand. These soils are classified as Stilson loamy sands that typically have two A horizons which extend to 74 cm. The soil stratigraphy for ST1 on T198B would indicate that a second A horizon exists between the Ap horizon and A2 horizon. This would suggest that the site has suffered from periods of deflation and re-deposition.

Compounding this problem is the use of foundation stones or brick for support of many turn of the century structures. Trinkley et al. (1996:72) report that this would likely decrease the chances of any sub-surface features being present. No privy or well depressions were located at this site.

This site does not appear to possess either the data sets, or integrity, necessary to address these issues (Campbell et al. 1996:214-230). The information the site can provide, primarily on lower coastal plain settlement patterns and association with environmental zones, has been recovered through the current survey. Consequently, site 9LG120 is recommended as not eligible for inclusion on the National Register of Historic Places.

9LG121

Site 9LG121 is a historic ceramic scatter located 40 m west of Fort Stewart Road 34 about 150 m south of the intersection of Fort Stewart Roads 9B and 34. The central UTM coordinates for the site are N3539579 E423845. The site elevation is 33 m AMSL.

The site is situated on a terrace approximately 300 m west of the Taylors Creek drainage. Vegetation at the site consists of mixed farm pine, hardwoods, and oak resulting in very poor surface visibility. The site yielded a total of 10 artifacts.

Site 9LG121 was initially discovered during routine shovel testing (ST3 on T205B) from which one stoneware ceramic was recovered. An additional 31 shovel tests were excavated at 10 m intervals in cardinal directions from the initial positive shovel test. Two of these, or 6%, yielded a total of five artifacts. These included one white porcelain ceramic from N150E230 and two undecorated whiteware ceramics, one wire cut nail, and one unidentified iron fragment N150 E230.

A general surface collection was conducted during subsurface testing, producing four artifacts. These included one undecorated whiteware ceramic, one enameled tin pan, one glass insulator, and one fragment of mortar. A number of features were also observed, including a possible well depression, a possible privy depression, two brick scatters, and a road depression. A number of electrical power poles were observed as well. The site covers an area 95 m north-south by 60 m east-west, or approximately 5,700 m^2.

A 50 cm test unit was centrally located and excavated to a depth of 50 cm. No artifacts were recovered from this unit. The soil profile of the test unit revealed 14 cm of very dark grayish brown (10YR 3/2) loamy sand overlying 16 cm of brown/dark brown (10YR 4/3) sand. This is followed by 20 cm of brownish yellow (10YR 6/6) sand. These soils are classified as Stilson loamy sands.

The artifacts recovered during testing would indicate the presence of historic domestic site which spans the mid-nineteenth to early twentieth centuries. The mean ceramic date range for the site is 1813 to 1900. This collection is similar to that found at other dispersed farmsteads at Fort Stewart and this location corresponds with approximately 107 ha owned by Mrs. J.I. Branch prior to its sale to the United States government probably sometime in the 1940s (Savannah District, Corps of Engineers, Drawing Number 4860-14, Tract 295). This site corresponds well with the location of a house site shown on the 1920 USGS Glennville quadrangle map (see Figure 25).

Similar to other sites in the project area,

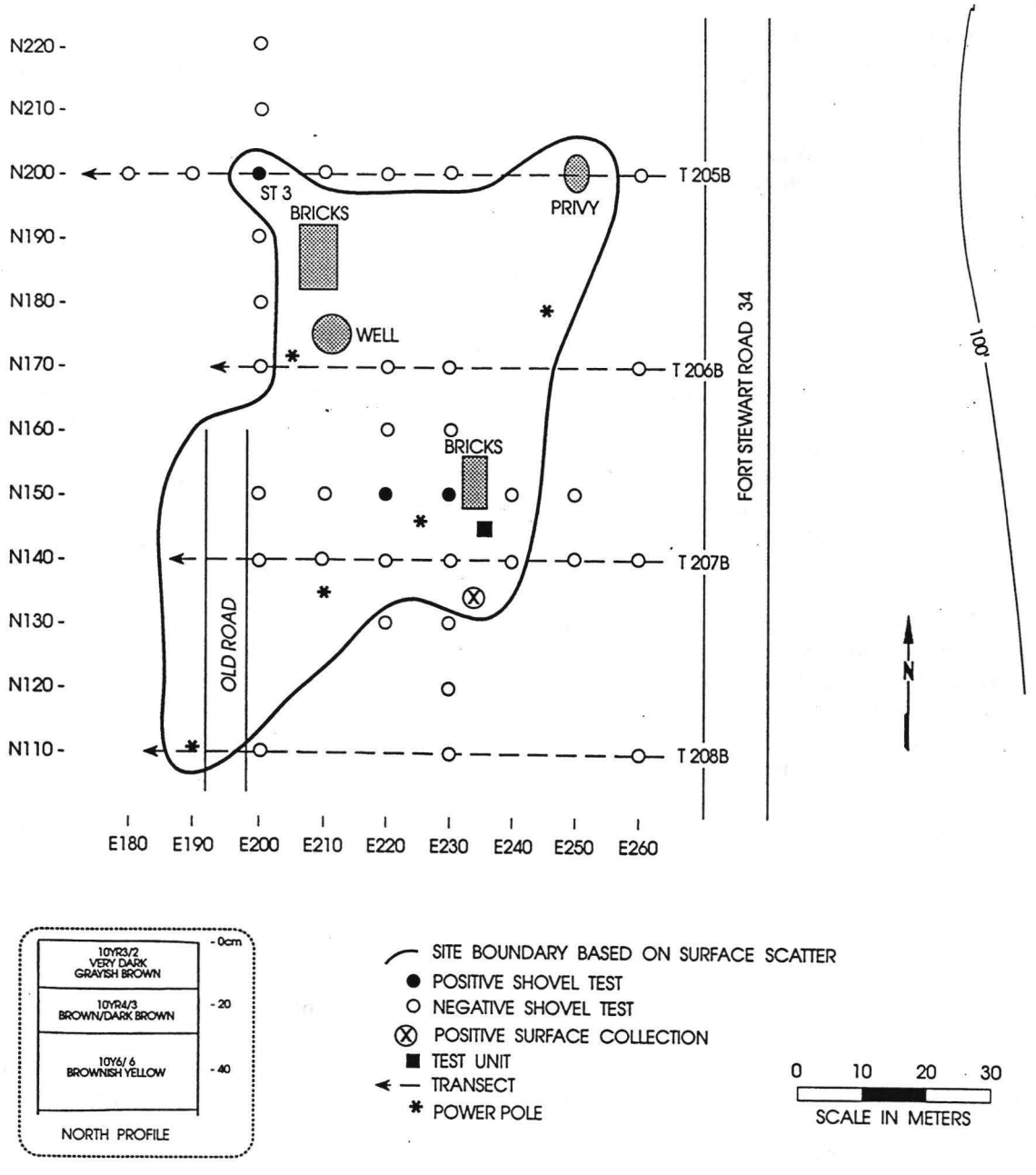


Figure 45. Map of 9LG121 and test unit profile.

the eastern portion of 9LG121 exhibits evidence of impacts by military operations. This is primarily in the form of large depressions made from track vehicles. West of these depressions the site contains a number of intact features and above ground material remains. Stilson soils normally have an Ap horizon of very dark grayish brown (10YR 4/2) soils to a depth of 15 cm and an A2 horizon of pale yellow (2.5YR 7/4) to 74 cm. A majority of the shovel tests suggest that approximately 10 to 25 cm of deposition has occurred. This probability of soil deposition at the site is supported by the test unit soil profile which suggests that a third A horizon exists. Just west of the site is a large area swampy area whose depth seems to fluctuate seasonally. The deposition observed at the site may be the result of flooding associated with seasonal variations in the depth of the swamp. As well, unlike most of the historic house sites recovered in Fort Stewart which are generally found at intersections of extant pre-base roads, the construction of Fort Stewart Road 34 has allowed the survival of much of this site.

Site 9LG121, due to its probable integrity, may provide information on a broad range of issues concerning pre-base activities at Fort Stewart. This includes information concerning settlement patterns and resulting land use. As well, much of the western portion of Fort Stewart had access to electricity only a couple of years prior to the government's purchase of these properties (David McKivergan, personal communication 1997). The presence of electrical poles, wire, and insulators may give insight not only for a temporal frame for the introduction of electricity to farmsteads in rural Georgia but possibly status as well. Consequently, site 9LG121 is recommended as potentially eligible for inclusion on the National Register of Historic Places.

9LG130

Site 9LG130 is a historic ceramic scatter located on the southwest corner of Fort Stewart Roads 9 and 33B (Figure 46). The central UTM coordinates for the site are N3539110 E423960. The site elevation is 30 m AMSL on a terrace approximately 60 m west of the Taylors Creek drainage. Vegetation at the site consists of oak with an understory of hardwood and pine reducing surface visibility to about 30%.

Site 9LG130 fell outside of the current survey boundaries. In accordance with the scope of work, a representative sample of artifacts was collected from the surface, but no shovel tests were excavated. A total of six artifacts were recovered – two undecorated whiteware ceramics, one stoneware ceramic, one fragment of milk glass, and two brick fragments.

Although much of the survey tract west of the site is disturbed from military activity and contains areas of standing water, a soil profile derived from the nearest shovel test to the site, ST3 on T219B, produced a profile suggestive of intact stratigraphy. This profile consists of 15 cm of dark gray (10YR 4/1) sandy loam overlying 30 cm of light gray (10YR 7/2) sand fairly typical of Leefield loamy sands.

Similar to a number of other sites located during the survey, the artifacts recovered from site 9LG130 suggest an occupation which may extend from the late nineteenth century through the mid-twentieth century. The site probably functioned as a farmstead.

Situated outside the survey tract and not subjected to more intensive shovel testing, we recommend this site as potentially eligible for inclusion on the National Register to ensure its protection until such time as it can be further evaluated.

Isolated Occurrences

Isolated occurrences, which consisted of five or fewer artifacts in a 20 m diameter, were found as either surface finds or through shovel testing. In all but one case the initial finding was treated as a site with a minimum of two additional shovel tests excavated off the positive test in cardinal directions, resulting in a minimum of eight negative shovel tests. The one exception to this practice was a surface find at the edge of north-south and east-west sand roads. In this case the roads themselves offered exceptional surface

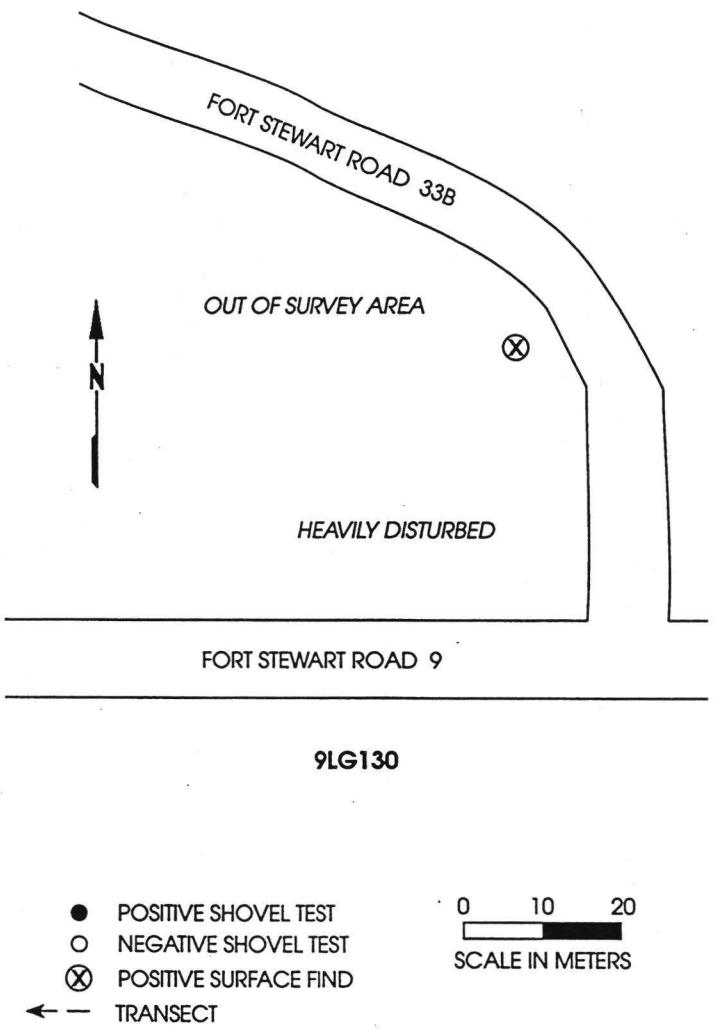


Figure 46. Map of 9LG130.

visibility and no shovel tests (other than those associated with the 30 m transects) were dug.

Detailed individual sites maps are not provided, since in every case such maps would be of no assistance in relocating the site, establishing its boundaries, or understanding the setting. We have provided small scale sketch maps (Figures 47 through 52), however, to help the reader better understand the testing methodology.

All of these isolated occurrences, by definition, are normally considered not eligible for inclusion on the National Register of Historic Places by the State Historic Preservation Office and we are in concurrence with this assessment for each site.

9LG6

Site 9LG6 was previously recorded by Professional Analysts, Inc. as a prehistoric site (Figure 47). This site was relocated during the current survey and is explained in detail on page 69. This site is recommended as not eligible for inclusion on the National Register of Historic places and no further work is recommended.

9LG9

Site 9LG6 was previously recorded by Carolina Archaeological Services as a prehistoric site (Figure 47). This site was relocated during the current survey and is explained in detail on page 70. This site is recommended as not eligible for inclusion on the National Register of Historic places and no further work is recommended.

9LG95

Site 9LG95 is a historic isolated occurrence collected from ST11 on T25A. The site is located 210 m southeast of the intersection of Fort Stewart Roads 5 and 6 (Figure 47). The central UTM coordinates are N3540665 E420660. The site elevation is 52 m AMSL.

The site is situated on a ridge slope which inclines southward toward a portion of the drainage associated with Taylors Creek. Vegetation consists of sparse grass and farm pine. with limited surface visibility. One undecorated whiteware ceramic was recovered from the surface. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG96

Site 9LG96 is a historic isolated occurrence collected from ST16 on T38A. The site is located 270 m east of Fort Stewart Road 5 approximately 480 m south of the intersection of Fort Stewart Roads 5 and 6 (Figure 47). The central UTM coordinates are N3540225 E420560. The site elevation is 52 m AMSL.

The site is situated on a terrace about 150 m southwest of the Taylors Creek drainage. Vegetation consists of sparse grass with mixed hardwoods and farm pine resulting in limited surface visibility. One undecorated whiteware ceramic and one aqua glass fragment were recovered from the surface. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG98

Site 9LG98 is a historic isolated occurrence collected from ST5 on T42A. The site is located 150 m east of Fort Stewart Road 5 approximately 810 m south of the intersection of Fort Stewart Roads 5 and 6 (Figure 48). The central UTM coordinates are N3540020 E420320. The site elevation is 50 m AMSL.

The site is situated on a terrace about 150 m northwest of the Taylors Creek drainage. Vegetation consists of very sparse grass and oak trees. One Albany slip stoneware ceramic and one green glass fragment were recovered from the surface. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. Shovel test N190 E200 yielded one

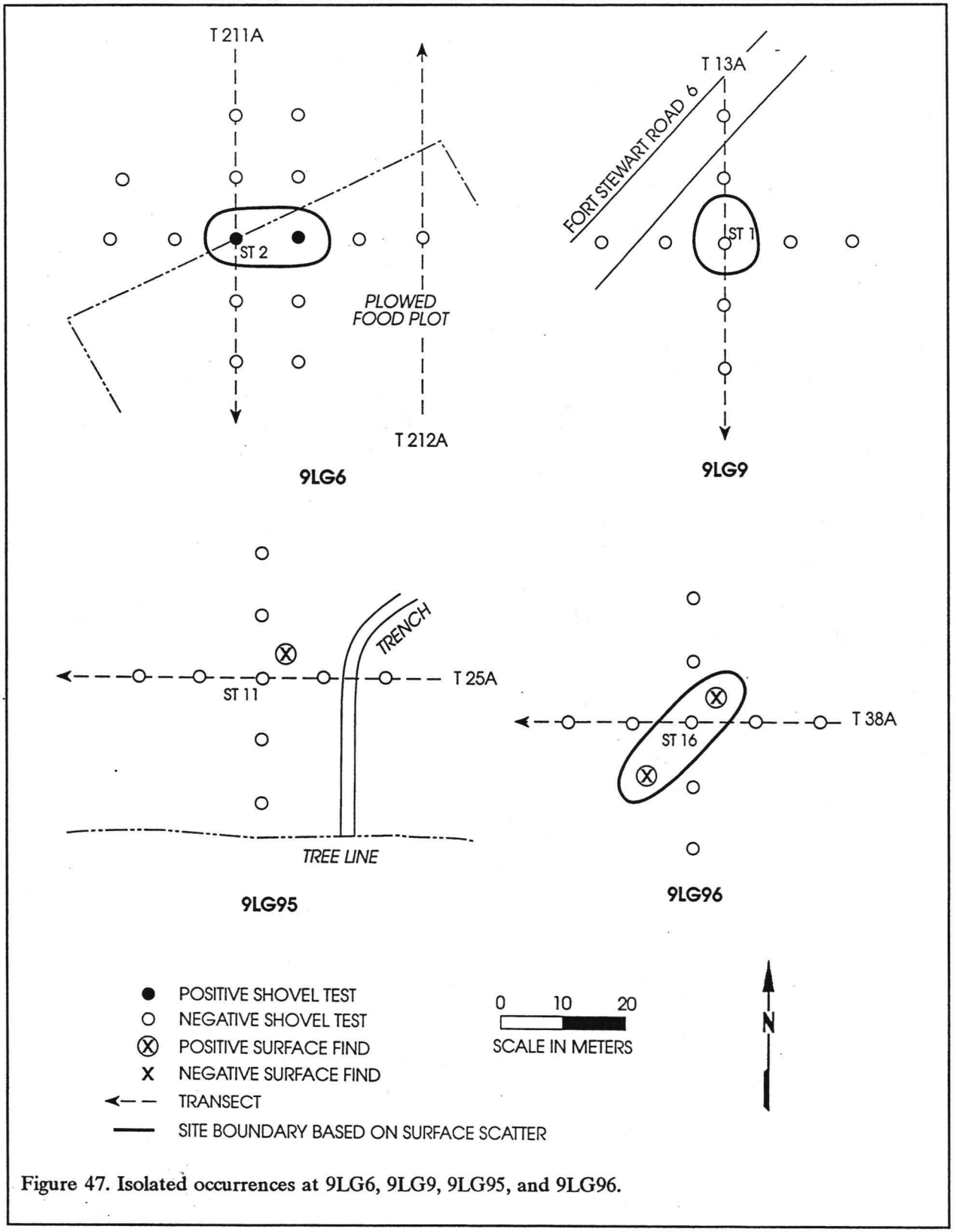


Figure 47. Isolated occurrences at 9LG6, 9LG9, 9LG95, and 9LG96.

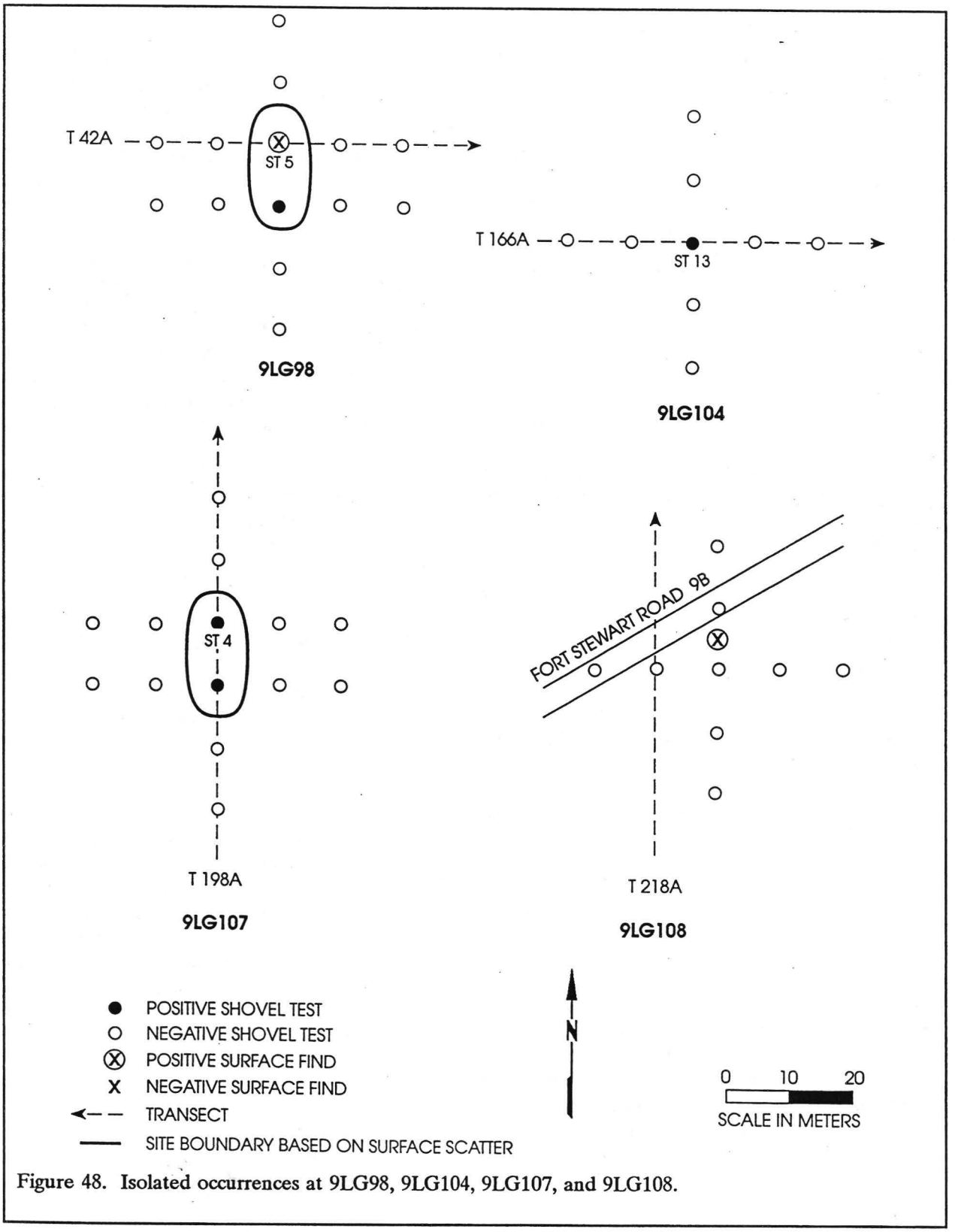


Figure 48. Isolated occurrences at 9LG98, 9LG104, 9LG107, and 9LG108.

window glass fragment. The remainder were all negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG104

Site 9LG104 is a prehistoric isolated occurrence recovered from ST5 on T42A. The site is located 390 m east of Fort Stewart Road 5 approximately 330 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 48). The central UTM coordinates are N3539100 E420320. The site elevation is 46 m AMSL.

The site is situated on the swamp edge and is surrounded on the east, south, and west by the Taylors Creek drainage. Vegetation consists of farm pine and needlefall resulting in limited surface visibility. One chert flake was recovered from N200E200. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG107

Site 9LG107 is a prehistoric isolated occurrence recovered from ST4 on T198A. The site is located 100 m north of Fort Stewart Road 9B approximately 1,110 m east of the intersection of Fort Stewart Roads 5 and 9B (Figure 48). The central UTM coordinates are N3539020 E420880. The site elevation is 46 m AMSL.

The site is situated on a ridge slope of about 3% about 75 m south of the Taylors Creek drainage. Vegetation consists of farm pine and needlefall resulting in limited visibility. One chert flake was recovered from N200E200. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. Shovel test N190E200 yielded two chert flakes. The remainder were all negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG108

Site 9LG108 is a prehistoric isolated occurrence collected at the beginning of Transect 218A. The site is located due south of Fort Stewart Road 9B approximately 1,650 m east of the intersection of Fort Stewart Roads 5 and 9B (Figure 48). The central UTM coordinates are N3539040 E421480. The site elevation is 40 m AMSL.

The site is situated on a ridge top about 300 m northwest of a portion of the Taylors Creek drainage. Vegetation consists of farm pine and needlefall. Surface visibility is approximately 10%. One chert projectile point fragment was collected from the surface. Nine additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG109

Site 9LG109 is a historic isolated occurrence recovered from ST15 on T290A. The site is located 10 m west of Fort Stewart Road 9B approximately 450 m north of the intersection of Fort Stewart Roads 9 and 9B (Figure 49). The central UTM coordinates are N3540160 E423660. The site elevation is 40 m AMSL.

The site is situated on a ridge top about 300 m northwest of a portion of the Taylors Creek drainage. Vegetation consists of farm pine and needlefall resulting in limited visibility. One aqua glass fragment and one green glass fragment were recovered from ST15 on 290A. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG111

Site 9LG111 is a historic isolated occurrence recovered from ST15 on T300A. The site is located 390 m west of Fort Stewart Road 9B

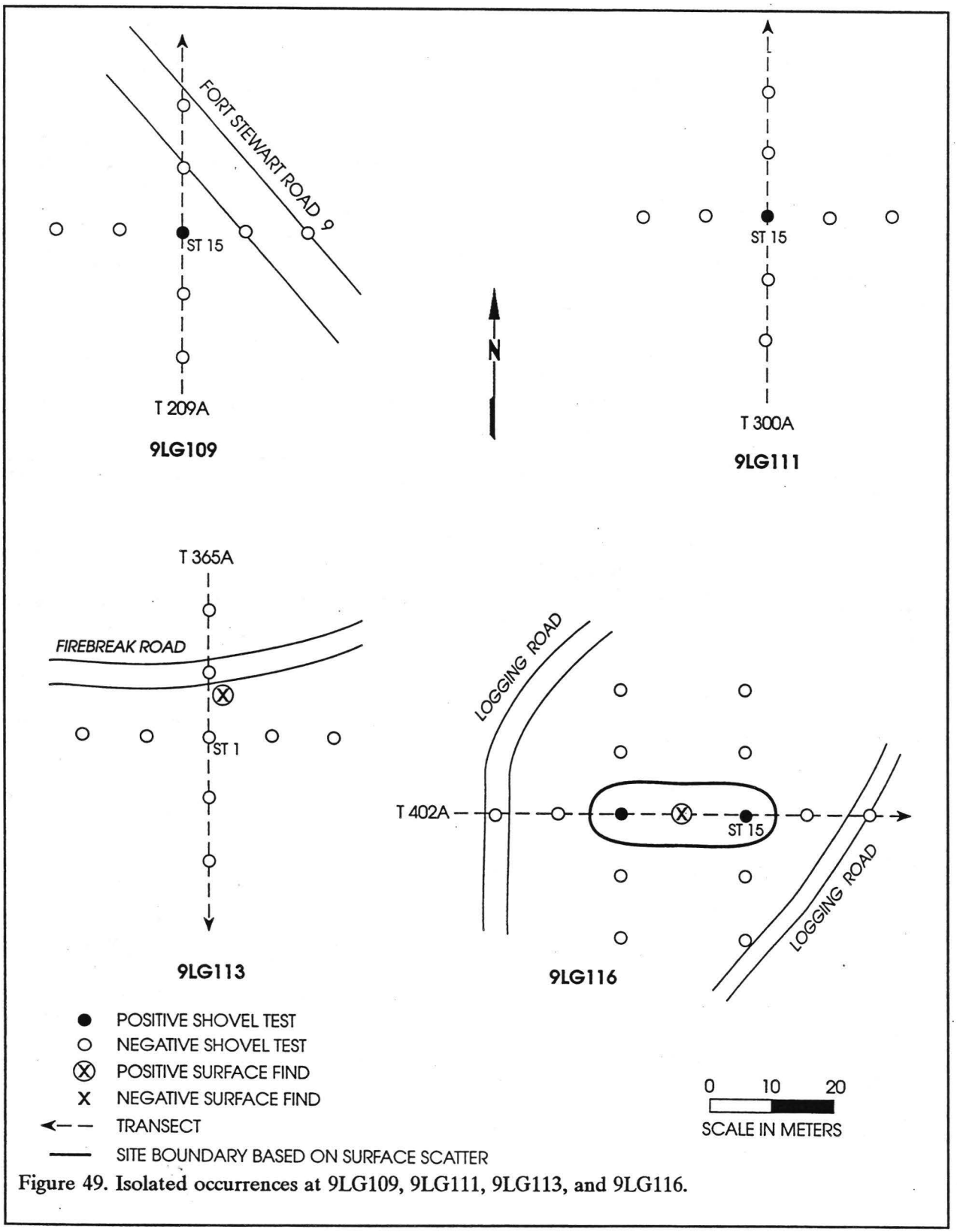


Figure 49. Isolated occurrences at 9LG109, 9LG111, 9LG113, and 9LG116.

approximately 540 m north of the intersection of Fort Stewart Roads 9 and 9B (Figure 49). The central UTM coordinates are N3540640 E423340. The site elevation is 29 m AMSL.

The site is situated on a terrace about 330 m southeast of a portion of the Taylors Creek drainage. Vegetation consists of mixed hardwood and farm pine resulting in limited surface visibility. One clear glass fragment and one green glass fragment were recovered from ST15 on T300A. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG113

Site 9LG113 is a historic isolated occurrence collected from ST1 on T365A. The site is located on a firebreak Road 420 m southeast of Fort Stewart Road 6 approximately 870 m east of the intersection of Fort Stewart Roads 5 and 6 (Figure 49). The central UTM coordinates are N3541080 E421520. The site elevation is 46 m AMSL.

The site is situated on a ridge side slope about 300 m east of a portion of the Taylors Creek drainage. Vegetation consists of farm pine resulting in limited visibility. One undecorated whiteware ceramic was, however found on the surface. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG116

Site 9LG116 is a prehistoric/historic isolated occurrence recovered from ST15 on T402A. The site is located 180 m west of Fort Stewart Road 5 approximately 450 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 48). The central UTM coordinates are N3539280 E419760. The site elevation is 47 m AMSL.

The site is situated on a terrace about 30 m west of a plowed food plot. Vegetation consists of farm pine. Surface visibility is non-existent. One brick fragment was recovered from ST15 on T402A. Thirteen additional shovel tests were conducted on a north-south by east-west cruciform pattern. One chert flake was recovered from N200E180. The remainder were all negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG118

Site 9LG118 is a prehistoric isolated occurrence recovered from ST2 on T410A. The site is located 60 m north of the western extension of Fort Stewart Road 9B and 1,320 m west of its intersection with Fort Stewart Road 5 (Figure 50). The central UTM coordinates are N3539100 E419300. The site elevation is 47 m AMSL.

The site is situated on a terrace slope about 20 m south of a swamp edge. Vegetation consists of farm pine resulting in limited surface visibility. One chert flake was recovered from the initial shovel test. Twenty additional shovel tests were conducted on a north-south by east-west cruciform pattern. One chert flake was recovered from N200E220 and one chert flake was recovered from N200E210. The remainder were all negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG119

Site 9LG119 is a historic isolated occurrence recovered from ST19 on T410A. The site is located 90 m west of Fort Stewart Road 5 approximately 240 m north of the intersection of Fort Stewart Roads 5 and 9B (Figure 50). The central UTM coordinates are N3539040 E419840. The site elevation is 47 m AMSL.

The site is situated on an open terrace and vegetation consists of farm pine with oak understory. Surface visibility is approximately 25%. One amber glass fragment was recovered from the transect shovel test. Eight additional

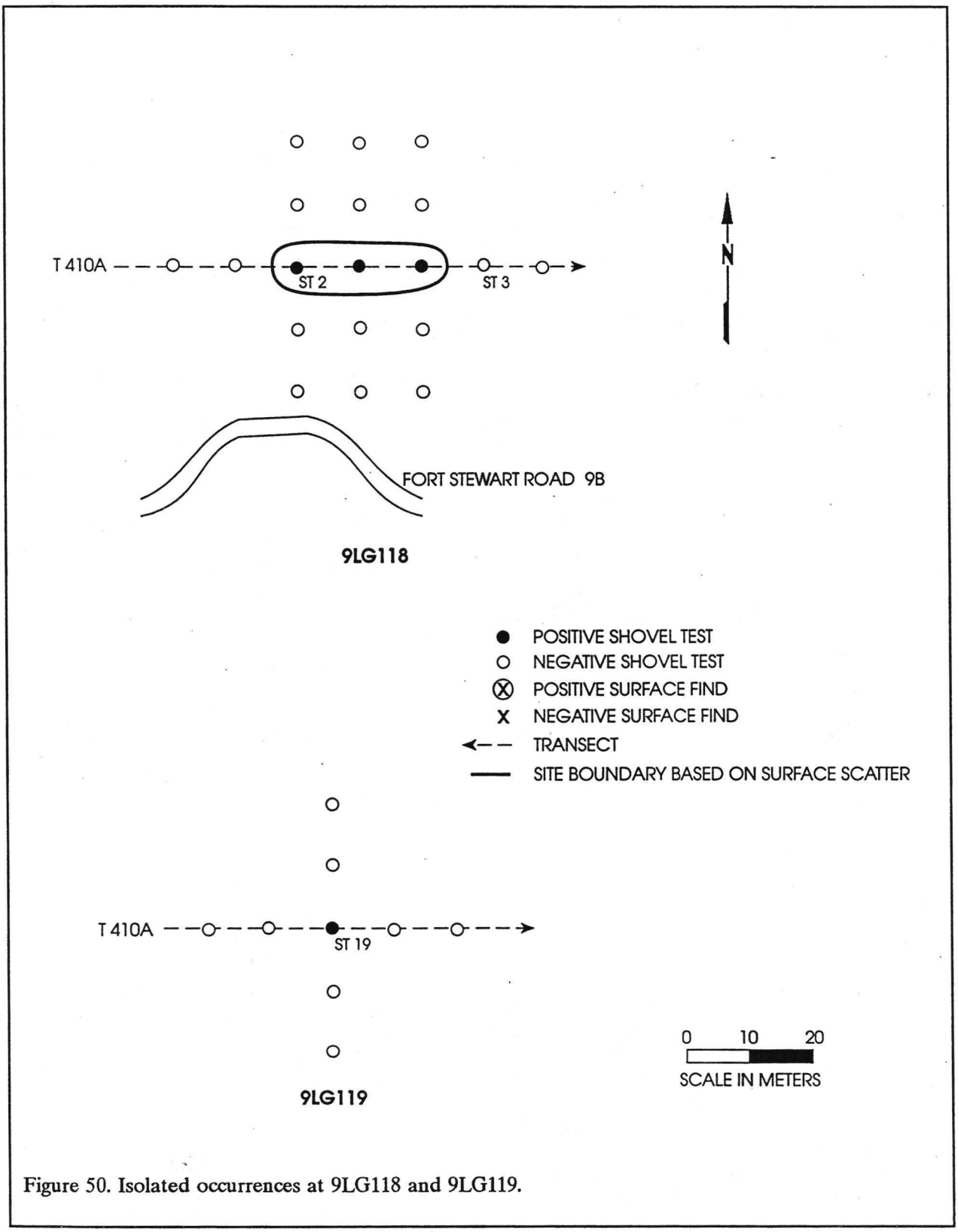


Figure 50. Isolated occurrences at 9LG118 and 9LG119.

shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG122

Site 9LG122 is a prehistoric isolated occurrence recovered from ST1 on T122B. The site is located 630 m east of Fort Stewart Road 33B approximately 960 m south of the intersection of Fort Stewart Roads 4 and 33B (Figure 51). The central UTM coordinates are N3536430 E421220. The site elevation is 40 m AMSL.

The site is situated on a terrace slope approximately 10 m south and west of an unnamed drainage. Vegetation consists of sparse grass and farm pine with a hardwood understory. Surface visibility is approximately 5%. One chert flake was recovered from ST1 on T122B. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG123

Site 9LG123 is a prehistoric isolated occurrence recovered from ST4 on T118B. The site is located 690 m east of Fort Stewart Road 33B approximately 840 m south of the intersection of Fort Stewart Roads 4 and 33B (Figure 51). The central UTM coordinates are N3536430 E421290. The site elevation is 40 m AMSL.

The site is situated on a terrace slope approximately 120 m northwest of an unnamed drainage. Vegetation consists of sparse grass and farm pine with a hardwood understory. Surface visibility is approximately 5%. One chert flake was recovered from ST4 on T118B. Nineteen additional shovel tests were conducted on a north-south by east-west cruciform pattern. One chert flake each was recovered from N210E210, N210E200, and N200E210. The remaining shovel tests were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG124

Site 9LG124 is a prehistoric isolated occurrence recovered from ST25 on T113B. The site is located 750 m east of Fort Stewart Road 33B approximately 690 m south of the intersection of Fort Stewart Roads 4 and 33B (Figure 51). The central UTM coordinates are N3536710 E421820. The site elevation is 40 m AMSL.

The site is situated on a terrace slope approximately 150 m west of an unnamed drainage. Vegetation consists of sparse grass and farm pine with a hardwood understory. Surface visibility is approximately 5%. One chert flake was recovered from the initial shovel test. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG125

Site 9LG125 is a historic isolated occurrence collected from ST1 on T88B. The site is located 10 m south of Fort Stewart Road 4 approximately 540 m east of the intersection of Fort Stewart Roads 4 and 33B (Figure 51). The central UTM coordinates are N3537469 E421250. The site elevation is 40 m AMSL.

The site is situated on a terrace slope about 450 m west of an unnamed drainage. Vegetation consists of mixed hardwood and farm pine. Surface visibility is approximately 20%. Two undecorated whiteware ceramics were collected from ST1 on T88B. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG126

Site 9LG126 is a historic isolated

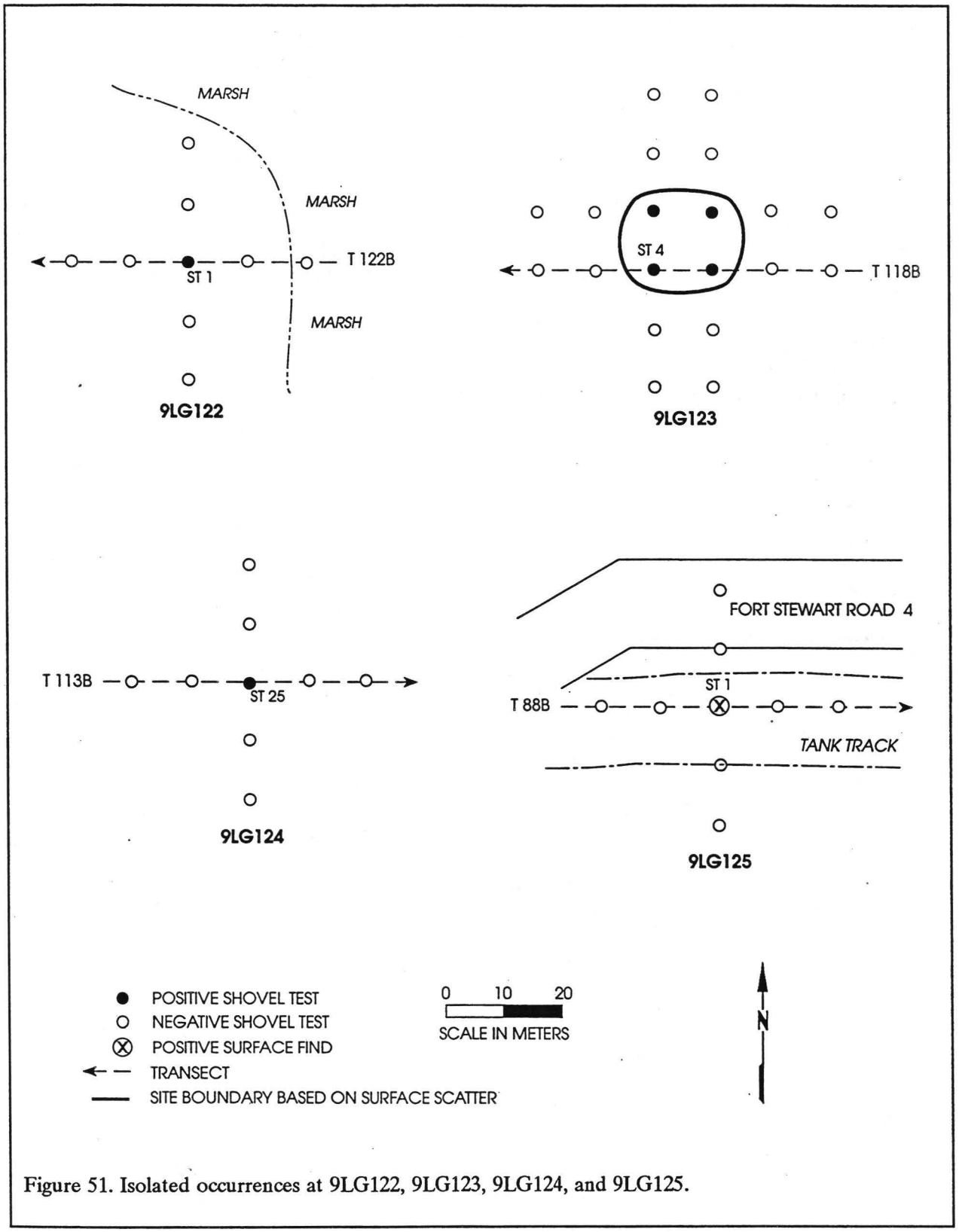


Figure 51. Isolated occurrences at 9LG122, 9LG123, 9LG124, and 9LG125.

occurrence recovered from ST15 on T65B. The site is located near a firebreak road 960 m southeast of the intersection of Fort Stewart Roads 5 and 9B (Figure 52). The central UTM coordinates are N3538339 E420820. The site elevation is 44 m AMSL.

The site is situated on a terrace slope about 600 m west of the Taylors Creek drainage. Vegetation consists of mixed hardwood and farm pine. Surface visibility is approximately 10%. One stoneware fragment was recovered from ST15 on T65B. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG127

Site 9LG127 is a historic isolated occurrence recovered from ST15 on T62B. The site is located between two firebreak roads 1,050 m southeast of the intersection of Fort Stewart Roads 5 and 9B (Figure 52). The central UTM coordinates are N3538380 E420898. The site elevation is 44 m AMSL.

The site is situated on a terrace slope about 510 m west of the Taylors Creek drainage. Vegetation consists of mixed hardwood and farm pine. Surface visibility is approximately 10%. One flow blue transfer print pearlware ceramic was collected from the initial shovel test. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG128

Site 9LG128 is a historic isolated occurrence recovered from ST16 on T54B. The site is located south of a firebreak road 420 m south Fort Stewart Road 9B and 1,290 m southeast of the intersection of Fort Stewart Roads 5 and 9B (Figure 52). The central UTM coordinates are N3538479 E421140. The site elevation is 43 m AMSL.

The site is situated on a terrace slope about 270 m west of the Taylors Creek drainage. Vegetation consists of mixed hardwood and farm pine. Surface visibility is approximately 10%. One undecorated pearlware ceramic was collected from ST16 on T54B. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

9LG129

Site 9LG129 is a prehistoric isolated occurrence recovered from ST18 on T49B. The site is located north, east, and south of a firebreak road 540 m south Fort Stewart Road 9B and 1,440 m southeast of the intersection of Fort Stewart Roads 5 and 9B (Figure 52). The central UTM coordinates are N3538358 E421309. The site elevation is 40 m AMSL.

The site is situated on a terrace slope about 120 m west of the Taylors Creek drainage. Vegetation consists of mixed hardwood and farm pine. Surface visibility is approximately 10%. One chert flake was collected from ST18 on T49B. Eight additional shovel tests were conducted on a north-south by east-west cruciform pattern. All were negative and this site is recommended as not eligible for inclusion on the National Register of Historic Places. No further work is recommended.

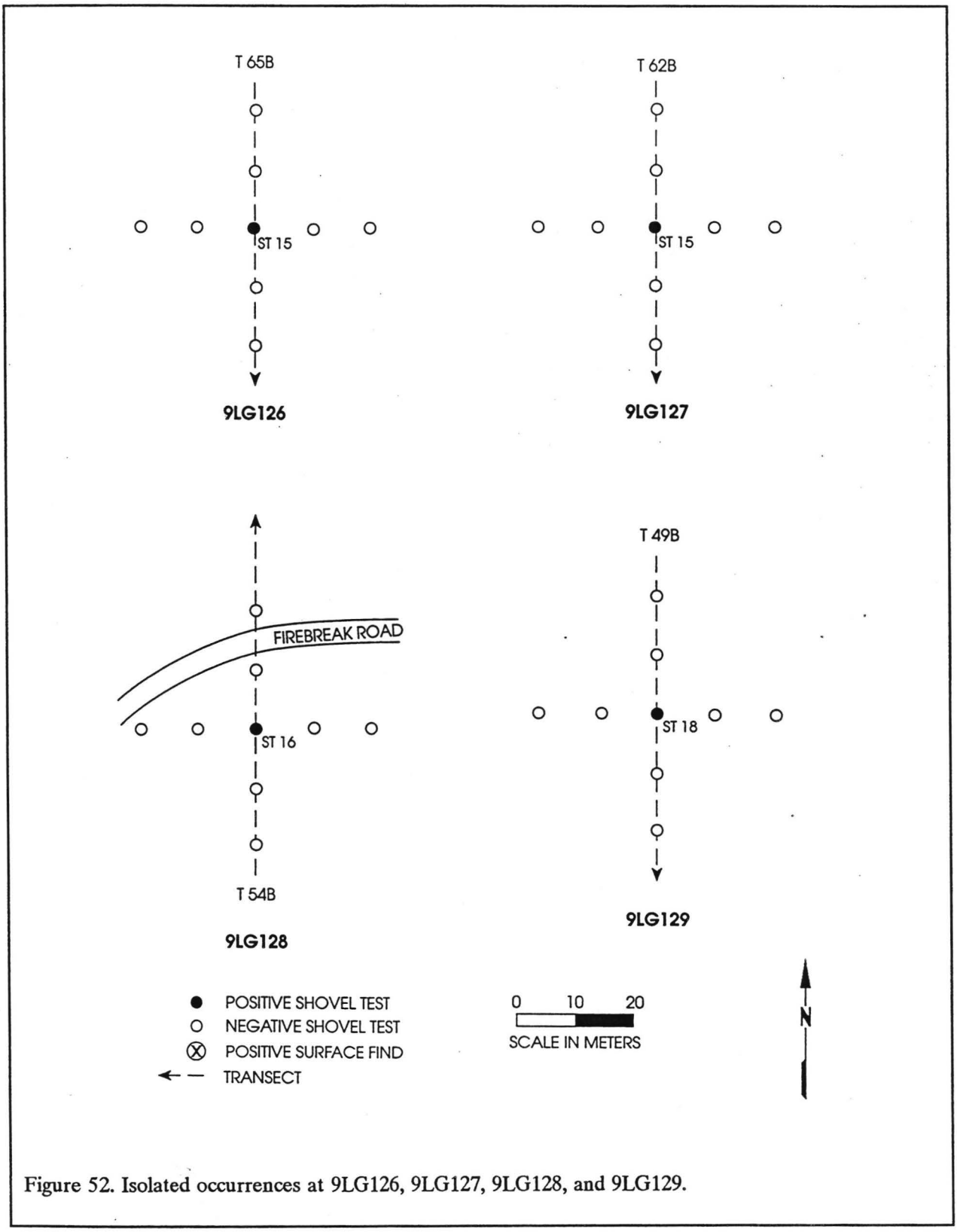


Figure 52. Isolated occurrences at 9LG126, 9LG127, 9LG128, and 9LG129.

CONCLUSIONS

Introduction

As a result of the intensive survey of the 809 ha Survey Tract "A" and the 804 ha Survey Tract "B" in the Brigade Maneuver area at Fort Stewart, 21 archaeological sites and 22 isolated occurrences were revisited or identified. Of these resources (which are briefly outlined in Table 3), none are recommended as eligible for inclusion on the National Register of Historic Places, although two are recommended as potentially eligible. Both of the potentially eligible sites are located in survey tract "B". One — 9LG121 — is situated in the far northeastern corner of the survey tract, whereas the other — 9LG130 — is situated just outside the survey tract. The remaining sites and isolated occurrences are all recommended as not eligible for inclusion on the National Register. Sites 9LG10 and 9LG33 could not be found and are assumed to be totally collected or destroyed. As such, they too, are recommended as not eligible.

Survey Tract "A" yielded a site density of 2.1 sites per km² if only the archaeological sites are taken into account and isolated occurrences are excluded. Although site densities are slightly twice that projected by Miller and his colleagues (in Campbell et al. 1996) of 1.1 sites per km², they compare favorably with those densities found in the Chicora 1995-96 survey of Taylors Creek where a site density of 2.5 per km² was found (Trinkley et al. 1996:113). Survey Tract "A" contained the small community of Shady Grove whereas the Taylors Creek project area contained the community of Taylors Creek.

Survey tract "B" yielded a site density of 0.3 sites per km², approximately a quarter of the site density projected by Miller (in Campbell et al. 1996). This compares to a site density for the JAECK Drop Zone survey tract, conducted in 1995-96 by the Chicora Foundation, of 0.76 sites per km² (Trinkley et al. 1996:113).

The difference in the site densities between the two survey tracts is at least partially accounted for by the presence of the Shady Grove Community, which increased the number of sites (occurring as small farmsteads) in Survey Tract A. In addition, Survey Tract B is dominated entirely by poorly to very poorly drained Ellabelle, Mascotte, and Pelham soils. In contrast, Survey Tract A, while containing large areas of poorly drained Ellabelle soils, also includes extensive tracts of Albany soils, which are somewhat poorly drained, as well as the well drained Blanton and Fuquay soils. In other words, there are larger areas of better drained soils in close proximity to drainages in Survey Tract A. These ecological edge areas seem to be preferred by prehistoric people.

These site densities are also important because they suggest that this area of the Coastal Plain can, in certain settings, exhibit settlement densities far in excess of those currently projected. Regardless, the densities we are identifying at Fort Stewart are considerably lower than those projected for Fort Bragg in North Carolina, where site densities of between 10 and 22 sites per km² have been identified (Trinkley et al. 1995:135).

Issues discussed in these conclusions include an overview of the potentially eligible sites, recommendations for further study to determine eligibility, and recommendations for their protection. Also included is an overview of current predictive modeling, which includes an examination of locational data; an exploration of the methods being used for site discovery, which includes discussion of the effectiveness of shovel testing and the identification of potentially buried sites; the examination of site function/duration based on artifact content; and an overview of what has been learned concerning the cultural phases present in the study area.

Overview of Potentially Eligible Sites

Two sites are recommended as potentially eligible for inclusion on the National Register of Historic Places — 9LG121 and 9LG130.

9LG121

This is a small historic site identified in the northeastern corner of Survey Tract "B", probably representing a house site dating from the mid- to late nineteenth century. The site exhibited a possible buried midden, two brick rubble piles, a well depression, a privy depression, and electrical poles along with a broad range of artifacts. There are a number of questions concerning the late nineteenth century historic occupation of Fort Stewart which have yet to be addressed through archaeological research (see, for example, Jackson et al. 1988:25-29; Campbell et al. 1996:123-127).

Situated just inside the survey tract west of Fort Stewart Road 34, this site was recorded, but could not be thoroughly assessed. Consequently, at present it is not possible to determine whether this site has the potential to address the broad range of research questions which might be appropriate at late nineteenth century historic farmsteads in the project area. Given this uncertainty, the only prudent approach is to assume that the site is potentially eligible until a testing program is able to fully the assess the site's research potential.

The current study did not completely answer questions concerning the impact plowing or military activities may have had on the site. Additional, larger, tests are necessary to more accurately evaluate site conditions. This additional, Phase II, testing using 1 m dispersed units would also assist in more clearly delineating concentrations of material in the site and, hopefully, identifying horizontal stratigraphy.

Finally, the excavation of perhaps a two or three 2-meter units would allow a larger collection to be gathered. This would better allow assessment of site density, the potential for feature recovery, and the range of materials present at the site.

9LG130

This is a small historic site identified just off Survey Tract "B" at the intersection of Fort Stewart Roads 33 and 34. This site likely represents a house site dating from the late nineteenth century. Very few artifacts were recovered from this site, probably the result of it being used as a bivouac area for Fort Stewart personnel.

Situated primarily off the survey tract, this site was recorded, but could not be thoroughly assessed. Consequently, at present it is not possible to determine whether this site has the potential to address the broad range of research questions appropriate for late nineteenth century farmsteads in the project area. Given this uncertainty, the only prudent approach is to assume that the site is potentially eligible until a through survey determines otherwise.

Site Management Prior to Additional Survey or Testing

These two sites, as potentially eligible for inclusion on the National Register, should be avoided by all ground disturbing activities until additional survey or testing can be accomplished.

Site 9LG121 is located in an area of active training exercises. Even though the site is situated in an area without an extant access road, the eastern portion of the site has already been impacted by military operations. This area should be posted as off limits to all troop activity. It should also be avoided by silvacultural and agricultural activities.

Site 9LG130 is located at an intersection, which according to bivouac patterns established in this and previous studies (Trinkley et al. 1996), places it in an area considered highly accessible to training exercises. Numerous Meals Ready to Eat (MRE) packs and their contents were located in this area. This area should be placed off-limits until the necessary testing can be accomplished.

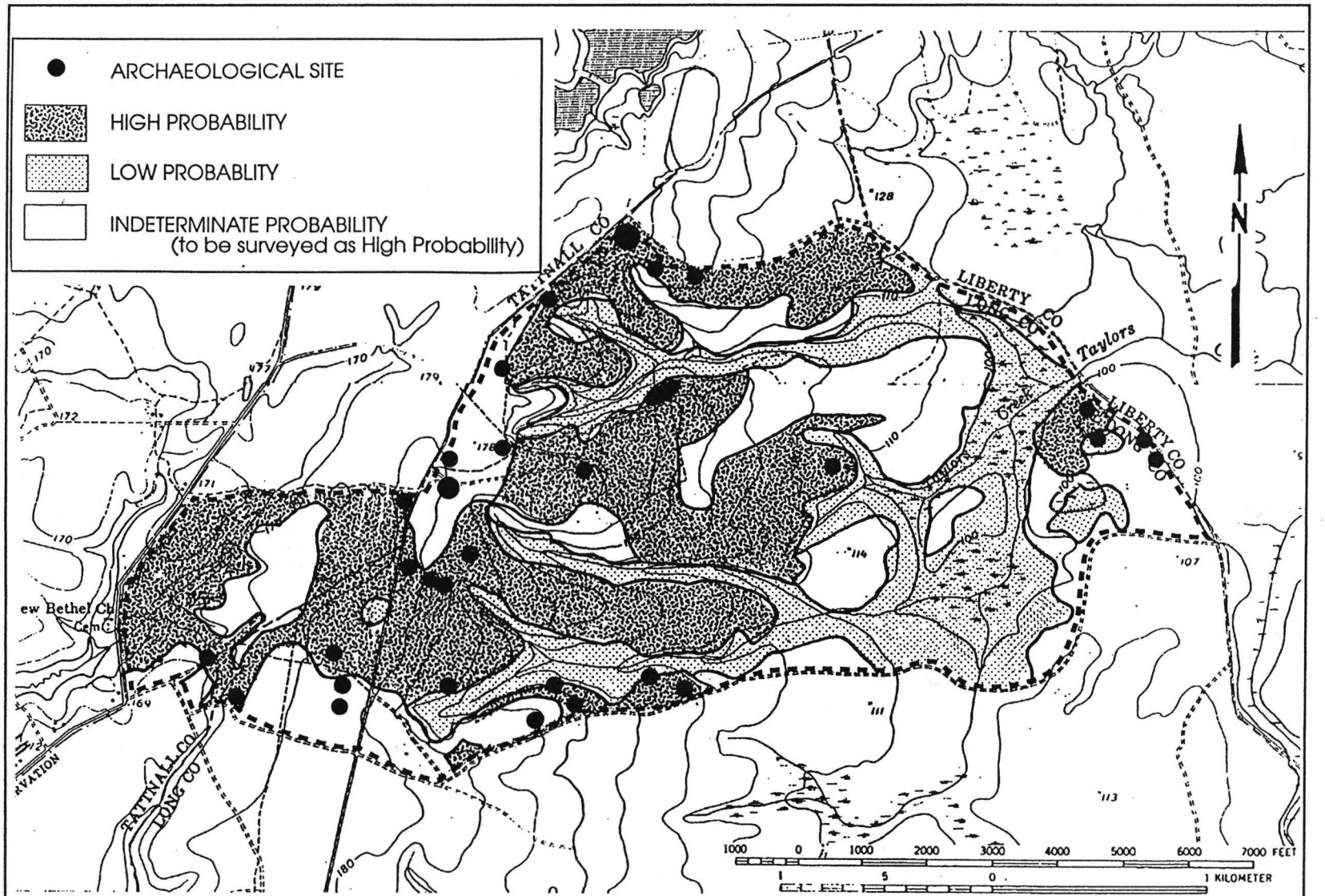


Figure 53. Site probability map for Survey Tract "A" developed by Campbell et al. (1996).

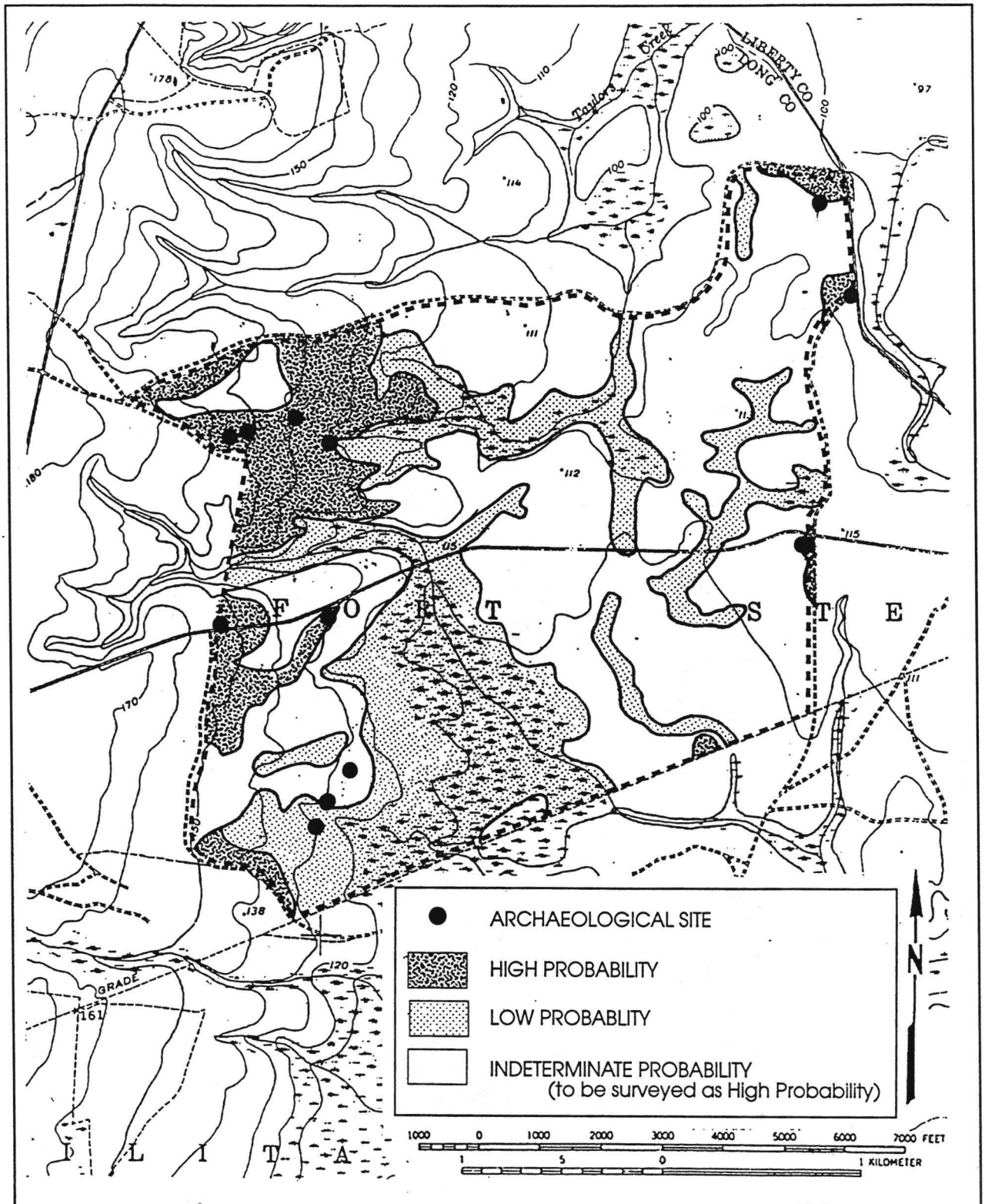


Figure 54. Site probability map for Survey Tract "B" developed by Campbell et al. (1996).

The Current Predictive Model and Land Use

As was briefly discussed in the **Prehistoric and Historic Overview** section, Fort Stewart has a predictive model developed by a rather limited survey, but "rigorous statistical manipulation of the survey results in relation to soil zones" (Campbell et al. 1996:203). The result was a series of 1:50,000 scale maps which have "disappeared" (Campbell et al. 1996:211). Consequently, "the greatest problem with the model is that it cannot be duplicated" (Campbell et al. 1996:211).

Regardless, a reconstruction of this model by Campbell et al. (1996:214-217) led to the predictive maps for the Brigade Maneuver area which includes Survey Tracts "A" and "B" (Figures 53 and 54). The original predictive model, which apparently used soils, stream rank, and perhaps other factors, has been reduced essentially to a reliance on soil drainage (Campbell et al. 1996:215-217).

This becomes clear when Figures 8 and 9, which show the soils of the two tracts, are compared to the probability maps (Figures 53 and 54). Soils of the Albany, Dothan, Fuquay, Oscilla, Stilson, and Tifton series are classified by the current predictive model as having a high probability of archaeological remains (see Campbell et al. 1996:216). This is in spite of the fact that the Albany Series soils are classified as somewhat poorly drained and occurring on nearly level areas (Looper 1982:19). The current model includes moderately well drained soils such as the Blanton Series (Looper 1989:21, 24) in the category of "indeterminate".

The three prehistoric sites are found on either Albany (n=1), Ellabelle (n=1), or Leefield (n=1) soils. The 19 historic sites are found on Albany (n=5), Blanton (n=3), Fuquay (n=4) and Stilson (n=4) and Mascotte (n=1) soils. Clearly there is a strong association, at least in this study, between archaeological site locations and soils. Moreover, at least some of the moderately well drained soils, such as Blanton, might better be considered as high probably locations (at least when they are in close proximity to drainages, as discussed below).

Our study, however, may do more to demonstrate that site probabilities are best based on a broad range of factors than to confirm the current predictive model. When the location of the prehistoric sites is examined there is an equally strong correlation between site location and topography.

All of the prehistoric sites in Survey Tract "A" are situated along the swamp margin. Although a majority of the project area contains drainages, none of the sites are found further "inland" than about 200 meters, regardless of the soil or how well drained it might be. They are found on terrace slopes overlooking small drainages and all are on poorly drained soils. Broad expanses of more well drained soils were ignored in favor of the proximity to water and bottomland drainages. Further, not all of the available, seemingly appropriate, topographic settings were utilized. Of the 10 possible drainages on the survey tract, only three were used by Native American groups. This suggests there are additional, as yet unclear, factors affecting site locations.

The location of historic sites is not much more clear. The community of Shady Grove, in Survey Tract "A", was situated on a ridge of well drained soils surrounded by swamp and poorly drained soils. This location, much like that found at Taylors Creek (Trinkley et al. 1996), would suggest that the community appears to have selected relatively well drained soils in close proximity to a major drainage. In Survey Tract "B" the four historic sites are individual house sites, perhaps representing examples of both communally oriented structures and dispersed settlements. All are located from 300 to 400 m from a creek or some other source of water. Two are situated on moderately drained soils while the other two are found on somewhat poorly and poorly drained soils. Although the sample is small, these data suggest that late nineteenth and early twentieth century historic locations are more dependent on commercial, industrial, and agricultural needs than on soils, water, or topography. For this area, the impetus behind the historic settlement may have been plans to connect the Ogeechee to the Altamaha via the Canoochee River by digging a canal through the ridge where Fort Stewart Road

5 now runs (David McKivergan, personal communication 1997).

Unfortunately, the data from these studies is not adequate to support revisions in the Fort Stewart predictive model. This discussion is primarily designed to suggest that, first, the site density may be expected to vary tremendously on the base, depending on the setting and, second, the factors affecting site locations can be expected to be considerably more complex than the current model suggests.

Effectiveness of Current Methodology

There are two methodological issues involved in this particular topic. The first is whether conventional shovel testing is an effective tool for the recovery of archaeological sites in the Fort Stewart setting. The second is whether conventional shovel testing is an appropriate tool for the identification and evaluation of historic communities, such as Shady Grove.

Effectiveness of Shovel Testing

There can be little doubt that shovel testing is the only effective tool for identifying archaeological sites in settings such as Fort Stewart. Even with the use of frequent burns as a forest management tool and the associated disturbance caused by the use of the base, ground visibility in the survey tracts was limited. Only 23 of the recorded sites, or 54%, would likely have been identified as a result of a pedestrian survey. Of this number, only one prehistoric site, or 2%, of the total sites would have been located. The other 46% would have been missed. Consequently, in this context shovel testing was both essential and successful.

Greater concern, however, can be expressed concerning the cost-effectiveness of shovel testing to identify deeply buried sites. Going into Survey Tract "A", we were aware that some the soils exhibited deep, and at times buried, A horizons. Shovel testing was consequently rigorous and tests typically exceeded 55 cm in depth, often going as deep as 75 cm.

In spite of this intensive testing, no deeply buried sites were encountered. In fact, of the approximately 12,231 shovel tests excavated in Survey Tract "A" and Survey Tract "B" only eight (.06%) yielded materials deeper than about 30 cm. In all eight of these cases the materials were small flakes and were isolated finds. ***No deeply buried sites were found.*** It would seem that these areas were apparently not attractive to prehistoric occupants and sites, as previously discussed, were found only near drainages.

While we are sympathetic to the desire to expand our understanding (and recovery) of deeply buried sites, this is a very time consuming (and hence costly) way of achieving that goal. We believe a more appropriate approach is to build on the current study.

Specifically, we recommend that future surveys on Fort Stewart, in similar soil and topographic settings as Survey Tract "A" and "B", anticipate a 5% sample of shovel tests in interior areas exhibiting deep soils be excavated to the B horizon. In contrast, 50% of the shovel tests on transects within 200 m of drainages should be excavated to the base of the A horizon.

This approach ensures that the interior soils, at least for the immediate future, continue to be explored. But it also concentrates survey efforts on those areas where the potential for site recovery seems, at present, to be highest. This is an effective use of resources and ensures that surveys can be accomplished in a cost-effective manner.

Shovel Testing at Historic Communities

Another concern involved the use of shovel testing to explore the relatively modern component of the Shady Grove community. As seen in the historic overview, Shady Grove was located in an area economically important to both local and regional communities. Agricultural production provided the raw materials for local industry. Convenient transportation systems were available for the shipment of these products to other areas of the state and country. There is, historically, a great deal of data that may be acquired from historic sources which possibly still

exist.

Although a great deal is known about certain settlements within Fort Stewart (Yarbrough and Yarbrough 1987, Trinkley et al. 1996) very little is known of the small communities and dispersed settlements which dotted the landscape. There is, no doubt, an exceptional amount of information that may be obtained from oral history interviews of their former residents. Unfortunately, no in-depth studies, similar to those conducted the historic town sites of Dunbarton and Meyers Mill within the Savannah River Site in South Carolina (Browder et al. 1993), have been done at Fort Stewart. Such ethnographic or oral history surveys allow glimpses of the community, such as ethnicity, which are not always visible from archaeological data recovered during shovel testing.

An excellent example of why such oral history studies need to be conducted at Shady Grove and other small rural communities is the overall lack of information related to the establishment of small communities during the height of the turpentine industry between 1870 and 1940 and their ethnic makeup. Taylors Creek had a substantial African American presence within the community (Trinkley et al. 1996:52, 54). Quite often African Americans were hired as workers for the turpentine industry and as see in the **Historical Overview** section, villages were constructed for them to reside in. Although the vast majority of farmers within the pine lands were white (84.1% as opposed to 15.9%), very few local histories document their existence.

Former residents also have knowledge of where key structures, residences, and local businesses were located. Soil profiles throughout both project areas indicate a great deal of disturbance. Historical sites located along extant pre-base roads and their intersections contain the greatest disturbance. These areas are quite often used as bivouacs during training exercises. The amount of landscape disturbance within the community would indicate that intra-site close interval shovel testing may only supply broad site locations. Surveys which encounter these communities, per agreements with National Park Service personnel and the base consulting archaeologist, recognize that historic communities, such as Shady Grove, are a special (or unusual) circumstance and require special approaches. In particular, we recommend that the first step for all communities known to exist on the base should be subjected to a detailed historical overview which incorporated both documentary and oral history sources.

Once this information is in hand, it seems appropriate to initiate limited shovel testing, using 30 m transects, to (1) identify the approximate boundaries of the community in conjunction with the historical documents and (2) assess the condition of the archaeological resources. Additional testing should be on a judgmental basis, in order to evaluate specific structures or site areas, with the goal of determining integrity.

This is likely, as in the case of Shady Grove, to provide sufficient information to determine the site either potentially eligible (and requiring additional Phase II testing) or not eligible.

Site Function and Duration of Use

Sassaman et al. (1990) suggest that the density of artifacts at prehistoric sites is a useful measure of the relative intensity of material discard at a site, stating that the amount of discard is assumed to be proportional to the "cumulative duration of site occupation, and/or the total number of site occupants, and/or the intensity of activities from which discarded debris was generated" (Sassaman et al. 1990:223). Lithic tool manufacture, however, generates a large volume of debris which creates a bias in measures of occupation duration/intensity and Sassaman and his colleagues recommend calculating density for total assemblages and for artifacts other than debitage.

Unfortunately, both Survey Tract "A" and Survey Tract "B" produced few diagnostic lithic specimens; the vast majority of these materials being flakes. Only one biface fragment was recovered during the survey and this was an isolated occurrence. Also present from the collection is a small quantity (n=2) of identifiable sherds. They also warn that artifact density should

only be calculated for subsurface assemblages with an adequate sample size. While only shovel test collections can be used, the sample sizes are typically small. Because of these problems, other types of site analysis such as tool to debitage ratios and assemblage diversity were determined to be inappropriate with the collections available. Thus only artifact specific descriptions were used

Overview of the Fort Stewart Chronology

One of the questions raised in the overview of the regional prehistoric chronologies was whether the Fort Stewart area was closely tied to the chronology proposed for the mouth of the Savannah River, or if the chronology suggested by more interior locations, such as the Ocmulgee Big Bend area, might be more appropriate. Like many of the other questions proposed, the data are sparse and we can only make tentative stabs at answering this question. Although in previous studies (Trinkley et al. 1996) it was found that there seem to be aspects of both coastal and interior coastal plain cultures present on Fort Stewart, the present study found that very little prehistoric occupation has occurred in the Brigade Maneuver area. What little there is, suggested by the presence of Savannah Plain and Savannah Check Stamped pottery, occurred during the Mississippian Period (Figure 55). Yet, even the data to support this assessment is very sparse.

As seen today, the project area does not contain any substantial water resources other than that provided by swamp margins and relatively shallow portions of the Taylors Creek drainage. As well, the topography of the project area is relatively flat thus does not offer any observation areas where prehistoric sites are commonly found.

Historic occupation of the base is found in the form of dispersed settlements and small communities. These contain an array of artifacts that range from domestic items such as ceramics and canning jars to childrens toys (Figure 55 and 56). The two site recommended as potentially eligible, (9LG121 and 9LG130), should be monitored to ensure that their locations are undisturbed. Situated in an area of active military operations, they are at considerable risk. As previously outlined site 9LG121 should receive additional testing to determine its eligibility. This testing should focus on the discovery of subsurface remains, perhaps using a 5 meter test interval in those areas currently identified as exhibiting the densest concentration of materials. If intact soil horizons with cultural material can be found, it may be appropriate to conduct block excavations. Additional research design, however should be based on the findings of the intensive testing. Site 9LG130 receive additional intensive testing to determine its eligibility.

Although there are other sites which will continue to produce small quantities of artifacts as the soils are disturbed or moved about, they are not recommended as eligible or potentially eligible for inclusion on the National Register of Historic Places. Consequently, no other management activities are recommended for the remainder of the sites identified in the two survey tracts.

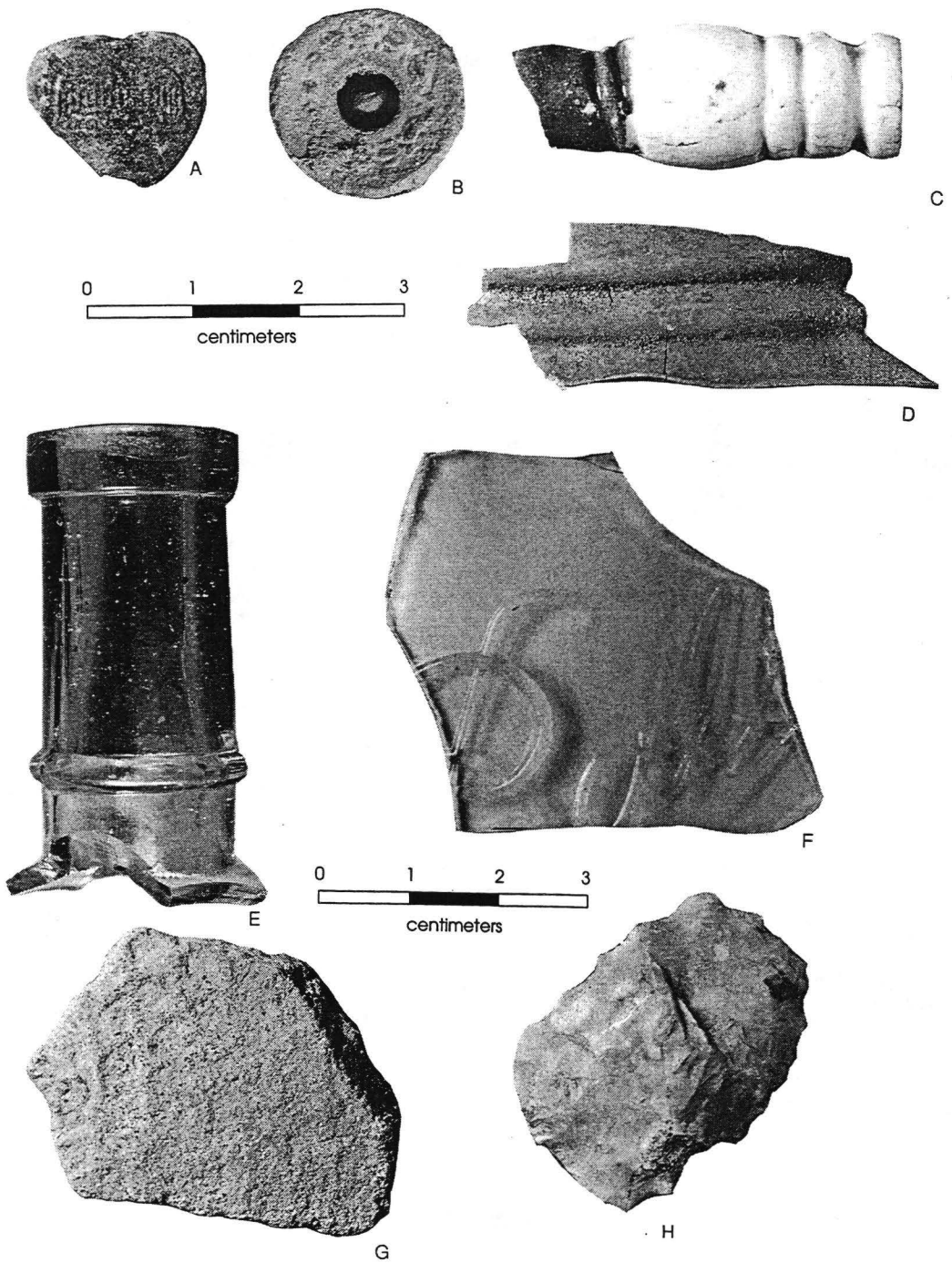


Figure 55. Historic and prehistoric artifacts. A, brass button fragment (9LG101); B, iron overalls button (9LG117); C, porcelain doll's arm fragment (9TT143); D, zinc canning jar lid fragment (9LG103); E, manganese glass bottle neck (9TT143); F, Ball canning jar fragment (9LG47); G, Savannah Check Stamped sherd (9LG105); H, chert biface (9LG100).

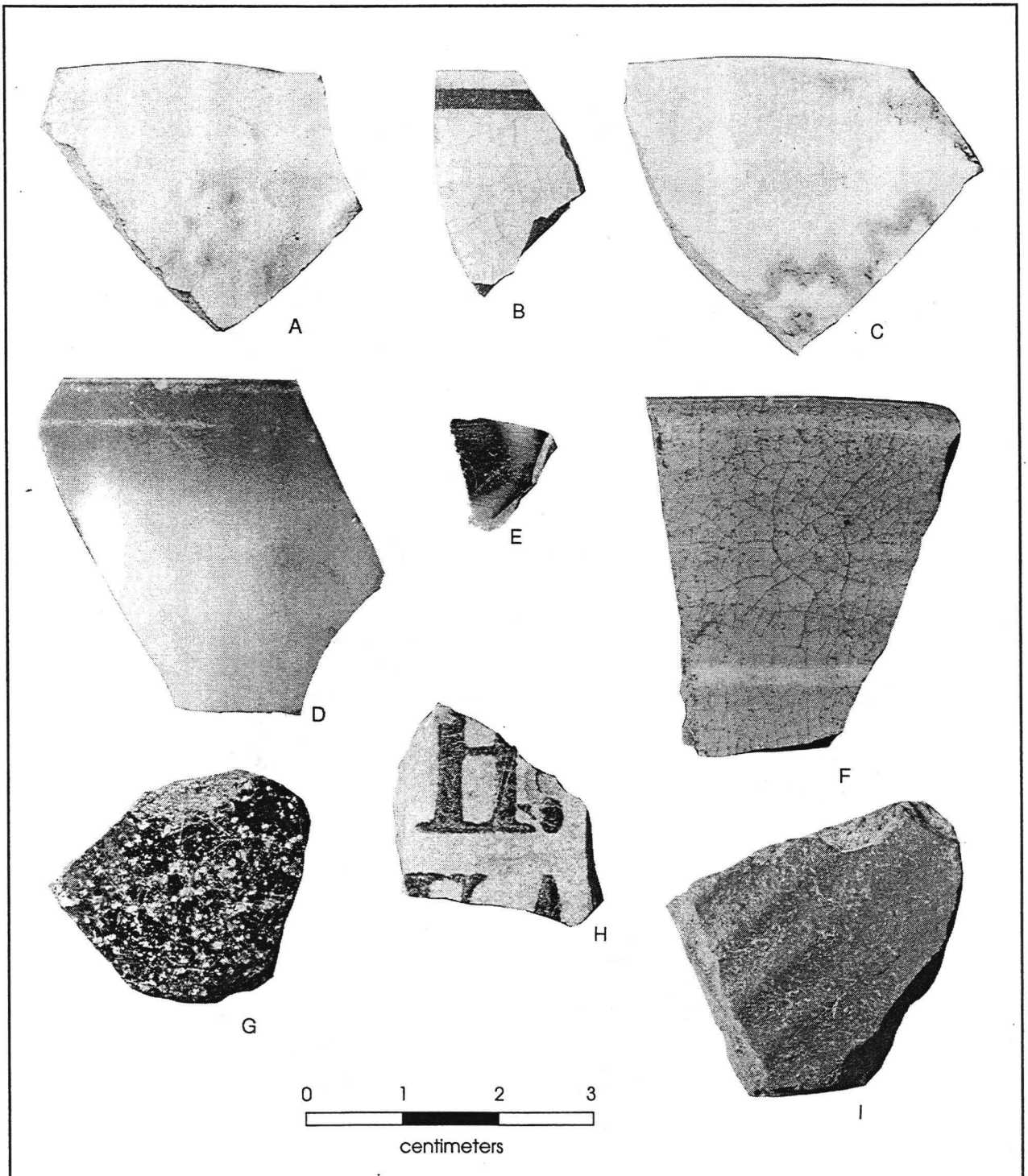


Figure 56. Historic ceramics. A, molded whiteware (9LG94); B, banded whiteware (9LG97); C, stamped whiteware (9LG47); D, green tinted whiteware (9TT142); E, blue transfer printed (flow blue) whiteware (9LG120); F, annular yellowware (9LG23); G, alkaline glazed stoneware (9LG47); H, stoneware, bristol slip on exterior with cobalt blue writing; I, Herty turpentine cup fragment (9LG120).

SOURCES CITED

Anderson, David G.

1975 The Distribution of Prehistoric Ceramics in the Coastal Plain of South Carolina. Unpublished manuscript with appendices and data sheets, on file at the South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1985 Middle Woodland Societies on the Lower South Atlantic Slope: A View from Georgia and South Carolina. *Early Georgia* 13:29-66.

1990 A North American Paleoindian Projectile Point Database. *Current Research in the Pleistobene* 7:67-69.

1992 Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderron, Kenneth G. Sassaman, and Christopher Judge, pp. 28-47. Council of South Carolina Professional Archaeologists, Columbia.

1994 *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast*. University of Alabama Press, Tuscaloosa.

1995 *Test Excavations at Civil War Period Battery Halleck, Fort Pulaski National Monument, Chatham County, Georgia*. Interagency Archaeological Services Division, National Park Service, Atlanta.

Anderson, David G. and Glen T. Hanson

1988 Early Archaic Settlement in the Southeastern United States: A Case Study from the Savannah River Valley. *American Antiquity* 53:262-286.

Anderson, David G. and J.W. Joseph

1988 *Prehistory and History Along the Upper Savannah River: Technical Synthesis of Cultural Resource Investigations, Richard B. Russell Multiple Resource Area*. Vol. 1. Garrow and Associates, Inc., Atlanta. Prepared for the Savannah District, U.S. Army Corps of Engineers, Savannah, Georgia.

Anderson, David G. and Kenneth E. Sassaman (editors)

1996 *The Paleoindian and Early Archaic Southeast*. University of Alabama Press, Tuscaloosa.

Anderson, David G., Kenneth E. Sassaman, and Christopher Judge (editors)

1992 *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*. Council of South Carolina Professional Archaeologists, Columbia.

Anderson, David G., R. Jerald Ledbetter, and Lisa O'Steen

1990 *Paleoindian Period Archaeology of Georgia*. Georgia Archaeological Research Design Paper 6. University of Georgia Laboratory of Archaeology Series Report 28. Athens.

Anonymous

1940 *Certain Aboriginal Culture Elements in Chatham County, Georgia*. Chatham County Archaeological Project, Work Projects Administration of Georgia. Ms. on file, Chicora Foundation, Inc., Columbia.

Ayres, Edward L.

1995 *Southern Crossing: A History of the American South 1877-1906*. Oxford University Press, Oxford.

Barr, William B.

1996a *Strawberry Ferry and Childsbury Towne: An Economic Enterprise along the Western Branch of the Cooper River, St. John's Parish, Berkeley County, South*

Carolina. Research Manuscript Series 224. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia. In press.

1996b *An Intensive Archaeological Survey of the Fort Lamar Water Battery and Confederate Encampment on the Secessionville Clark's Point Tract, James Island, Charleston County, South Carolina.* Research Contribution 200. Chicora Foundation, Inc., Columbia.

Bense, Judith A.
1994 *Archaeology of the Southeastern United States: Paleoindian to World War I.* Academic Press, New York.

Bense, Judith A., Hester A. Davis, Lorraine Heartfield, and Kathleen Deagan
1986 Standards and Guidelines for Quality Control in Archaeological Resource Management in the Southeastern United States. *Southeastern Archaeology* 5:52-62.

Braley, Chad O.
1990 The Lamar Ceramics of the Georgia Coast. In *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*, edited by Mark Williams and Gary Shapiro, pp. 94-103. University of Alabama Press, Tascaloosa.

Braley, Chad O. and T.J. Price
1991 *Cultural Resources Suvey of Selected (FY90) Timber Harvesting Areas, Fort Gordon, Richmond and Columbia Counties, Georgia.* Southeastern Archaeological Services, Athens. Prepared for the U.S. Army Corps of Engineers, Savannah District, and the Division of Forestry and Engineering, Fort Gordon, Georgia.

Browder, Tonya A., Richard D. Brooks, and David C. Crass
1993 *Memories of Home: Dunbarton and Meyers Mill Remembered*. Savannah River Archaeological Research Heritage Series 1, South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Bullen, Ripley P.
1975 *A Guide to the Identification of Florida Projectile Points*. Kendall Books, Gainesville.

Butler, William B.
1987 Significance and Other Frustrations in the CRM Process. *American Antiquity* 52:820-829.

Cable, John S.
1982 Differences in Lithic Assemblages of Forager and Collector Strategies. In *Archaeological Survey and Reconnaissance Within the Ten-Year Floodpool Harry S. Truman Dam and Reservoir*, edited by Richard Taylor. Report submitted to the U.S. Army Corps of Engineers, Kansas City District.

Cable, John S. and James W. Mueller
1980 *The Cultural Resources Survey and Evaluation of US 421 from Siler City to Stanly, Chatham and Randolph Counties, North Carolina.* Commonwealth Associates, Inc., Jackson, Michigan. Submitted to North Carolina Department of Transportation, Raleigh.

Caldwell, Joseph R.
1943 *Cultural Relations of Four Indian Sites of the Georgia Coast.* Unpublished M.A. Thesis, Department of Anthropology, University of Chicago, Chicago.

1970 Chronology of the Georgia Coast. *Southeastern Archaeological Conference Bulletin* 13:88-92.

Caldwell, Joseph R. and Catherine McCann
1941 *Irene Mound Site, Chatham County, Georgia*. University of Georgia Press, Athens.

Campbell, L. Janice, Mathilda Cox, and Prentice M.Thomas, Jr. (editors)
1996 *Fort Stewart and Hunter Army Airfield Historic Preservation Plan: Technical Synthesis Volume*. Report of Investigations 261. Prentice Thomas and Associates, n.p. Submitted to National Park Service, Southeast

Division, Atlanta.

Chapman, Jefferson
1977 *Archaic Period Research in the Lower Little Tennessee River Valley, 1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island.* Report of Investigations 18. University of Tennessee, Knoxville.

1985a Archaeology and the Archaic Period in the Southern Ridge-an-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 137-179. The University of Alabama Press, University.

1985b *Tellico Archaeology: 12,000 Years of Native American History*. Reports of Investigations 43, Occasional Paper 5, University of Tennessee, Knoxville.

Clements, John
1989 *Georgia Facts: A Comprehensive Look At Georgia Today*. Clements Research II, Inc., Dallas.

Coakley, Robert W.
1989 The American Revolution: First Phase. In *American Military History*, pp. 41-69. Center of Military History, United States Army, Washington, D.C.

Coclanis, Peter
1989 *The Shadow of a Dream: Economic Life and Death in the South Carolina Low Country 1670-1920*. Oxford University Press, New York.

Coe, Joffre L.
1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society* 54(5).

Coleman, Kenneth
1960 *Georgia History in Outline*. University of Georgia Press, Athens.

Coleman, Kenneth (editor)
1991 *A History of Georgia*. Second Edition. University of Georgia Press, Athens.

Conner, Beverly H. and David J. Hally
1979 Lithic Materials and Artifacts. In *Archaeological Investigations of the Little Egypt Site (9 Mu 102), Murray County, Ga., 1969 Season*, edited by David J. Hally, pp. 218-254. Laboratory of Archaeology Series Report 18. University of Georgia, Athens.

Coulter, E. Merton
1960 *Georgia: A Short History*. University of North Carolina, Chapel Hill.

Crook, Morgan
1978 *Mississippian Period Community Organizations on the Georgia Coast.* Ph.D. dissertation, University of Georgia. University Microfilms, Ann Arbor.

Cushion, John P.
1976 *Pottery and Porcelain Tablewares.* Studio Vista, London.

Daniel, I. Randolph
1992 Early Archaic Settlement in the Southeast: A North Carolina Perspective. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth E. Sassaman, and Christopher Judge, pp. 68-77. South Carolina Council of Professional Archaeologists, Columbia.

DeBow, J.D.B.
1854 *Statistical View of the United States*. A.O.P. Nicholson, Washington, D.C.

DePratter, Chester B.
1976 The Refuge Phase on the Coastal Plain of Georgia. *Early Georgia* 4:1-13.

1979 Ceramics. In The Anthropology of St. Catherines Island 2. The Refuge-Deptford Mortuary Complex, edited by David H. Thomas and Clark . Larsen, pp. 109-132. *Anthropological Papers of the American Museum of Natural History* 56(1).

1983 *Late Prehistoric and Early Historic Chiefdoms in the Southeastern United States*. Ph.D. dissertation, University

of Georgia, Athens. University Microfilms, Ann Arbor.

1991 *W.P.A. Archaeological Excavations in Chatham County, Georgia: 193-1942.* Laboratory of Archaeology Series Report 29. University of Georgia, Athens.

DePratter, Chester B. and James D. Howard
1980 Indian Occupation and Geologic Historic of the Georgia Coast: A 5,000 Year Summary. In *Excursions in Southeastern Geology: The Archaeology- Geology of the Georgia Coast*, edited by James D. Howard, Chester B. DePratter, and Robert W. Frey, pp. 1-65. Georgia Department of Natural Resources, Environmental Protection Division, Atlanta.

Donahue, Jack, Gary A. Cooke, and Frank J. Vento
n.d. Temper Types in St. Catherines Pottery. Ms. on file, Chicora Foundation, Inc., Columbia.

Drucker, Lesley, Ronald Anthony, Susan Jackson, Susan Krantz, and Carl Steen
1984 *An Archaeological Study of the Little River-Buffalo Creek Special Land Disposal Tract.* Carolina Archaeological Services, Columbia, South Carolina. Submitted to the U.S. Army Corps of Engineers, Savannah District, Savannah, Georgia.

Du Bois, W.E.B.
1992 Georgia: Invisible Empire State. In *These United States: Portraits of America from the 1920s*, edited by Daniel H. Borus, pp. 94-103. Cornell University Press, Ithaca.

Elliott, Daniel T. and Carl Steen
1992 *Jamestown Reconnaissance Survey.* Lamar Institute, Inc., Vanna, Georgia.

Elliott, Daniel T. and Roy Doyon
1981 *Archaeological and Historical Geography of the Savannah River Floodplain Near Augusta, Georgia.* Report 22. Laboratory of Anthropology, University of Georgia, Athens.

Elliott, Daniel T., J. Jerald Ledbetter, and Elizabeth A. Gordon
1994 *Data Recovery at Lovers Lane, Phinizy Swamp and the Old Dikes Sites, Bobby Jones Expressway Extension Corridor, Augusta, Georgia.* Occasional Papers in Cultural Resource Managment 7. Georgia Department of Transportation, Atlanta.

Fish, Paul R.
1976 *Patterns of Prehistoric Site Distribution in Effingham and Screven Counties, Georgia: Results of an Archaeological Survey of the U.S.D.A. Soil Conservation Service in Ebenezer Creek Watershed.* Laboratory of Archaeology Series Report 11. University of Georgia, Athens.

Ferguson, Leland G.
1971 *South Appalachian Mississippian.* Ph.D. dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor, Michigan.

Frech, Mary L. and William F. Swindler (editors)
1973 *Chronology and Documentary Handbook of the State of Georgia.* Oceana Publications, Dobbs Ferry, New York.

Friedheim, William and Ronald Jackson
1996 *Freedom's Unfinished Revolution: An Inquiry into the Civil War and Reconstruction.* The New Press, New York.

Garrow, Patrick H. (editor)
1982 *Archaeological Investigations on the Washington, D.C. Civic Center Site.* Soil Systems, Inc., n.p.

Glassow, Michael A.
1977 Issues in Evaluating the Significance of Archaeological Resources. *American Antiquity* 42:413-420.

Goad, Sharon I.
1979 *Chert Resources in Georgia: Archaeological and Geological Perspectives.* Report Number 21. Laboratory of Archaeology Series, University of Georgia, Athens.

Godden, Geoffrey A.
1964 *Encyclopaedia of British Pottery and Porcelain Marks.* Schiffer Publishing, Exton, Pennsylvania.

1985 *English China.* Barrie and Jenkins, London.

Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont.* Anthropological Studies 4, Occasional Papers of the Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Green, Michael D.
1979 *The Creeks: A Critical Bibliography.* Indiana University Press, Bloomington.

Green, William
1991 *The Search for Altamaha: The Archaeology and Ethnohistory of an Early 18th Century Yamasee Indian Town.* Unpublished M.A. Thesis, Department of Anthropology, University of South Carolina, Columbia.

Griffin, James B.
1943 An Analysis and Interpretation of the Ceramic Remains from Two Sites Near Beaufort, S.C. *Bureau of American Ethnology Bulletin* 133:155-168.

1985 Changing Concepts of the Prehistoric Mississippian Cultures of the Eastern United States. In *Alabama and the Borderlands: From Prehistory to Statehood*, edited by R.R. Badger and L.A. Clayton, pp. 40-63. University of Alabama Press, University, Alabama.

Groover, Robert L.
1987 *Sweet Land of Liberty: A History of Liberty County, Georgia.* W.H. Wolfe Associates, Roswell, Georgia.

Guernsey, Alfred H. and Henry M. Alden (edhtors)
1977 [1866] *Harpers Pictorial History of the Civil War.* Harper and Brothers, n.p. 1977 facsimile ed. Fairfax, n.p.

Harper, Roland M.
1922 Development of Agriculture in Lower Georgia from 1890 to 1920 with a Summary for the Whole State, 1850 to 1920. *Georgia Hostorical Quarterly* (6)326-354.

Hernden, G. Melvin
1968 Naval Stores in Colonial Georgia. In *Georgia Historical Quarterly* 52:426-433.

Hilliard, Sam B.
1984 *Atlas of Antebellum Southern Agriculture.* Louisiana State University Press, Baton Rouge.

Hodler, Thomas W. and Howard A. Schretter
1986 *The Atlas of Georgia.* Institute of Community and Area Development, University of Georgia, Athens.

Hvidt, Kristian (editor)
1980 *Von Reck's Voyage: Drawings and Journal of Philip Goerg Friedrich von Reck.* The Beehive Press, Savannah, Georgia.

Jackson, Susan H., Lesley M. Drucker, and Debra K. Martin
1988 *Cultural Resources Inventory Survey of the Brigade Maneuver Area, Fort Stewart, Georgia.* Resource Studies Series 115. Carolina Archaeological Services, Columbia.

Jefferies, Richard W.
1994 The Swift Creek Site and Woodland Platform Mounds in the Southeastern United States. In *Ocmulgee Archaeology, 1936-1986*, edited by David J. Hally, pp.71-83. The University Press of Georgia, Athens.

Jones, Grant D.
1978 The Ethnohistory of the Guale Coast Through 1684. In *The Anthropology of St. Catherines Island 1. Natural and Cultural History*, edited by David Hurst Thomas, Grant D. Jones, Roger S. Durham, and Clark Spencer Larsen, pp. 178-209. Anthropological Papers of the American Museum of Natural History 55(2).

Jones, Olive R.
1986 *Cylindrical English Wine and Beer Bottles, 1735-1850.* National Historic Parks and Sites Branch, Quebec.

Jones, Olive R. and Catherine Sullivan
1985 *The Parks Canada Glass Glossery for the Description of Containers, Tableware, Flat Glass, and Closures.* National Historic Parks and Sites Branch, Parks Canada, Quebec.

Keller, J.H., A.R. Kelly, and E.V. McMichael
1962 The Mandeville Site in Southwestern Georgia. *American Antiquity* 27:336-355.

Kennedy, Stetson
1990 *Jim Crow Guide: The Way It Was.* Florida Atlantic University Press, Boca Raton.

Knight, Lucian Lamar
1917 *A Standard History of Georgia and Georgians.* Vol. 2. Lewis Publishing, Chicago.

Küchler, A.W.
1964 *Potential Natural Vegetation of the Conterminous United States.* Special Publication 36. American Geographical Society, New York.

Lane, Mills
1993a *Standing Upon the Mouth of a Volcano: New South Georgia.* Beehive Press, Savannah.

1993b *Times that Prove People's Principles: Civil War in Georgia.* Beehive Press, Savannah.

Larsen, Clark Spencer (editor)
1990 *The Archaeology of Mission Santa Catalina de Guale: 2. Biocultural Interpretations of a Population in Transition.* Anthropological Papers of the American Museum of Natural History 68.

Larsen, Clark Spencer and David Hurst Thomas
1986 *The Archaeology of St. Catherines Island:5. The South Mound Complex.* Anthropological Papers of the American Museum of Natural History 63(1).

Larson, Lewis H., Jr.
1955 Unusual Figurine from the Georgia Coast. *Florida Anthropologist* 10(1-2):37-52.

1969 *Aboriginal Subsistence Technology on the Southeastern Coastal Plain During the Late Prehistoric Period.* Ph.D. dissertation, University of Michigan, Ann Arbor. University Microfilms, Ann Arbor, Michigan.

1978 Historic Guale Indians of the Georgia Coast and the Impact of the Spanish Mission Effort. In *Tacachale: Essays on the Indians of Florida and Southeastern Georgia During the Historic Period*, edited by Jerald Milanich and S. Proctor, pp. 120-140. University of Florida Press, Gainesville.

1980 *Aboriginal Subsistence Technology on the Southeastern Coastal Plain During the Late Historic Period.* Ripley P. Bullen Monographs in Anthropology and History 2. University Presses of Florida, Gainesville.

Ledbetter, R. Jerald
1995 *Archaeological Investigations at Mill Branch Sites 9WR4 and 9WR11, Warrent County, Georgia.* Technical Reports Number 3. Interagency Archaeological Services Division, National Park Service, Atlanta.

Ledbetter, R. Jerald, David G. Anderson, and Lisa D. O'Steen
1992 Paleoindian Research in Georgia. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth G. Sassaman, and Christopher Judge, pp. 248-262. Council of South Carolina Professional Archaeologists, Columbia.

Ledbetter, R. Jerald, Stephen A. Kowalewski, and Lisa O'Steen
1991 Chert of Southern Oconee County, Georgia. *Early Georgia* 9:1-13.

Legg, James B. and Steven D. Smith
1989 *"The Best Ever Occupied . . ." Archaeological Investigations of a Civil War Encampment on Folly Island, South Carolina.* Research Manuscript Servies 209. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Looper, Edward E.
1982 *Soil Survey of Liberty and Long Counties, Georgia*. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

Mathews, Thomas D., Frank W. Stapor, Jr., Charles R. Richter, John V. Miglarese, Michael D. McKenzie, and Lee R. Barclay
1980 *Ecological Characterization of the Sea Island Coastal Region of South Carolina and Georgia*, vol. 1. Office of Biological Services, Fish and Wildlife Service, Washington, D.C.

McKearin, George L. and Helen McKearin
1972 *American Glass.* Crown Publishers, New York.

McNally, Paul
1982 Table Glass in Canada, 1700-1850. *Parks Canada History and Archaeology* 60.

Michie, James L.
1968 The Brier Creek Lanceolate. *The Chesopiean* 4:123.

1977 *The Late Pleistocene Human Occupation of South Carolina*. Unpublished Honor's Thesis, Department of Anthropology, University of South Carolina, Columbia.

Milanich, Jerald T.
1971 *The Deptford Phase: An Archaeological Reconstruction*. Ph.D. Dissertation, University of Florida. University Microfilms, Ann Arbor.

Milanich, Jerald T. and Charles H. Fairbanks
1980 *Florida Archaeology*. Academic Press, New York.

Miller, George L.
1980 Classification and Economic Scaling of 19th Century Ceramics. *Historical Archaeology* 14:1-40.

1991 A Revised Set of CC Values for Classification and Economic Scaling of English Ceramics from 1787 to 1880. *Historical Archaeology* 25:1-25.

Miller, J.J., M.L. Fryman, J.W. Griffin, C.D. Lee, and D.E. Swindell
1993 *A Historical, Archaeological, and Architectural Survey of Fort Stewart Military Reservation, Georgia*. Professional Archaeological Services, Department of Anthropology, University of Georgia, Athens.

Nevens, Allan
1971 *The War for the Union*. Vol. IV. Charles Scribner's Sons, New York.

Noel Hume, Ivor
1978 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York..

Norman-Wilcox, Gregor
1965 Pottery and Porcelain. In *The Concise Encyclopedia of American Antiques,* edited by Helen Comstock, p. 132-161. Hawthorn, New York.

Oliver, Billy L.
1981 *The Piedmont Tradition: Refinement of the Savannah River Stemmed Point Type*. Unpublished Master's thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1985 Tradition and Typology: Basic Elements of the Carolina Projectile Point Sequence. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 195-211. The University of Alabama Press, University.

Paulk, Herschel L.
1980 *Soil Survey of Chandler, Evans, and Tattnall Counties, Georgia.* U. S. Department of Agriculture, Soil Conservation Service, Washington,

D.C.

Peirce, Donald C.
1988 *English Ceramics: The Frances and Emory Cocke Collection.* High Museum of Art, Atlanta.

Price, Cynthia
1979 *19th Century Ceramics in the Eastern Ozark Boarder Region*. Monograph Series 1. Center for Archaeological Research, Southwest Missouri University, Springfield.

Reese, Trevor R.. (editor)
1974 An Extract of the Rev. Mr. John Wesley's Journal From his Embarking for Georgia to his Return to London. In *Our First Visit in America: Early Reports from the Colony of Georgia 1732-1740*, pp. 185-242. Beehive Press, Savannah, Georgia.

Rose, Willie Lee
1964 *Rehearsal for Reconstruction: The Port Royal Experiment*. Oxford University Press, New York.

Rowland, Larry
1987 "Alone on the River:" The Rise and Fall of the Savannah River Rice Plantations of St. Peters Parish, South Carolina. *South Carolina Historical Magazine* 88(3): 121-150.

Sassaman, Kenneth E.
1985 A Preliminary Typological Assessment of MALA Hafted Bifaces from the Pen Point Site, Barnwell County, South Carolina. *South Carolina Antiquities* 17: 1-17.

1993 *Early Woodland Settlement in the Aiken Plateau: Archaeological Investigations at 38AK157, Savannah River Site, Aiken County, South Carolina*. Savannah River Archaeological Research Papers 3. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Sassaman, Kenneth E. and David G. Anderson
1990 Typology and Chronology. In *Native-American Prehistory of the Middle Savannah River Valley*, edited by Kenneth E. Sassaman, Mark J. Brooks, Glen T. Hanson, and David G. Anderson, pp. 143-216. Savannah River Archaeological Research Publication 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1994 *Middle and Late Archaic Archaeological Records of South Carolina: A Synthesis for Research and Resource Management*. Council of South Carolina Professional Archaeologists, Columbia.

Sassaman, Kenneth E., Mark J. Brooks, Glen T. Hanson, and David G. Anderson
1990 *Native American Prehistory of the Middle Savannah River Valley*. Savannah River Archaeological Research Papers 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Schnell, Frank T. and Newell O. Wright, Jr.
1993 *Mississippian Period Archaeology of the Georgia Coastal Plain*. Laboratory of Archaeology Series Report 26. University of Georgia, Athens.

Sears, William H.
1956 *Excavations at Kolomoki: Final Report*. University of Georgia Series in Anthropology 5. University of Georgia Press, Athens.

Shelford, Victor E.
1974 *The Ecology of North America*. University of Illinois Press, Urbana.

Shantz, H.L. and Zon, Raphael
1936 Natural Vegetation. In *Atlas of American Agriculture*, edited by O.E. Baker, pp. 1-29. U.S. Department of Agriculture, Washington, D.C.

Service, Elman R.
1966 *The Hunters*. Prentice-Hall, Englewood Cliffs, New Jersey.

Silver, Timothy
1990 *A New Face on the Countryside: Indians, Colonists, and Slaves in South Atlantic Forests, 1500-1800*. Oxford University Press, New York.

Smith, Betty A.
1972 *An Analysis of Regional Variations of Deptford Pottery*. Unpublished M.A. Thesis, Department of Anthropology, University of Georgia, Athens.

Smith, Bruce D.
1986 The Archaeology of the Southeastern United States: From Dalton to DeSoto, 10,500 -500 B.P. *Advances in World Archaeology* 5:1-88.

Smith, Hale G.
1948 Two Historical Archaeological Periods in Florida. *American Antiquity* 13:313-319.

Smith, Julia F.
1985 *Slavery and Rice Culture in Low Country Georgia, 1750-1860*. University of Tennessee Press, Jnoxville, Tennessee.

Smith, Marvin T.
1978 *Excavations at Several Woodland and Archaic Camp and Workshop Sites in Laurens County, Georgia*. Laboratory of Archaeology Series Report 16. University of Georgia, Athens.

Snow, Frankie
1977 *An Archaeological Survey of the Ocmulgee Big Bend Region: A Preliminary Report*. Occasional Papers from South Georgia 3. South Georgia College, Douglas, Georgia.

1990 Pine Barrens Lamar. In *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*, edited by Mark Williams and Gary Shapiro, pp. 82-93. University of Alabama Press, Tascaloosa.

South, Stanley
1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.

1993 *The Search for John Bartlam at Cain Hoy: America's First Creamware Potter*. Research Manuscript Series 219. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Stoltman, James B.
1974 *Groton Plantation: An Archaeological Study of a South Carolina Locality*. Monographs of the Peabody Museum 1. Harvard University, Cambridge.

Sutton, Mark Q. and Brooke S. Arkush
1996 *Archaeological Laboratory Methods: An Introduction*. Kendal/Hunt Publishing Company, Dubuque, Iowa.

Thomas, David Hurst
1987 *The Archaeology of Mission Santa Catalina de Guale: 1. Search and Discovery*. Anthropological Papers of the American Museum of Natural History 63(2).

Thomas, David Hurst and Clark Spencer Larsen
1979 *The Anthropology of St. Catherines Island 2. The Refuge-Deptford Mortuary Complex*. Anthropological Papers of the American Museum of Natural History 56(1).

Thomas, Kenneth H., Jr.
1975 *McCranie's Turpentine Still*. The Institute of Community and Area Development and the Georgia Department of Natural Resources, University of Georgia, Athens.

Thomas, Prentice M. Jr., L. Janice Campbell, and Mathilda Cox
1996 *Technical Synthesis of Cultural Resources Investigation at Fort Stewart and Hunter Army Airfield, Bryan, Chatham, Evans, Long. Liberty, and Tattnall Counties, Georgia*. Prentice Thomas and Associates, n.p. Prepared for National Park Service, Southeast Regional Office, Atlanta.

Townsend, Jan, John H. Sprinkle, Jr., and John Knoerl
1993 *Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts*. Bulletin 36.

National Park Service, National Register of Historic Places, Washington, D.C.

Trinkley, Michael
1976 *A Typology of Thom's Creek Pottery for the South Carolina Coast.* Unpublished M.A. Thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1980 *Investigation of the Woodland Period Along the South Carolina Coast.* Ph.D. Dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor.

1985 The Form and Function of South Carolina's Early Woodland Shell Rings. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 102-118. University of Alabama Press, University, Alabama.

1990 *An Archaeological Context for the South Carolina Woodland Period.* Research Series 22. Chicora Foundation, Inc., Columbia.

1996 *Intensive Archaeological Survey of the Seccessionville North Tract, James Island, Charleston County, South Carolina.* Research Contribution 195. Chicora Foundation, Inc., Columbia.

Trinkley, Michael and Natalie Adams
1994 *Middle and Late Woodland Life at Old House Creek, Hilton Head Island, South Carolina.* Research Series 42. Chicora Foundation, Inc., Columbia.

Trinkley, Michael, Debi Hacker, and Natalie Adams
1995 *Broom Hall Plantation: "A Pleasant One and in a Good Neighborhood."* Research Series 44. Chicora Foundation, Inc., Columbia.

Trinkley, Michael, William B. Barr, and Debi Hacker
1996 *An Archaeological Survey of the 522 ha JAECK Drop Zone and 241 ha Taylors Creek Tract, Fort Stewart, Long and Liberty Counties, Georgia.* Research Series 186. Chicora Foundation, Inc., Columbia.

Vose, Ruth Hurst
1975 *The Antique Collector's Guides: Glass.* Crescent Books, New York.

Walthall, John A.
1980 *Prehistoric Indians of the Southeast: Archaeology of Alabama.* University of Alabama Press, University.

Walton, Peter
1976 *Creamware and Other English Pottery at Temple Newsam House, Leeds: A Catalogue of the Leeds Collection.* Manningtion Press, Bradford.

Ward, Trawick
1983 Whites Creek: The Second Time Around. *South Carolina Antiquities* 15:63-65.

Waring, Antonio J., Jr.
1968 The Refuge Site, Jasper County, South Carolina. In *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.*, edited by Stephen B. Williams, pp. 198-208. Papers of the Peabody Museum of Archaeology and Ethnology 58.

Watts, W.A.
1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52:666-690.

1980 Late Quaternary Vegetation History at White Pond on the Inner Coastal Plain of South Carolina. *Quaternary Research* 13:187-199.

Watts, W.A. and M. Stuiver
1980 Late Wisconsin Climate of Northern Florida and the Origin of Species Rich Deciduous Forests. *Science* 210:325-327.

Weir, Robert
1983 *South Carolina: A History.* KTO Press, Millwood, New York.

Whitehead, Donald R.
1965 Palynology and Pleistocene Phytogeography of Unglaciated Eastern North America. In *The Quaternary of the United States*, edited by W.E. Wright, Jr. and David G. Fry.

Princeton University Press, Princeton.

1973 Late-Wisconsin Vegetational Changes in Unglaciated Eastern North America. *Quaternary Research* 3(4):621-631.

Willey, Gordon R.

1949 *Archaeology of the Florida Gulf Coast.* Smithsonian Miscellaneous Collections 113.

1966 *An Introduction to American Archaeology*. Vol. 1: North and Middle America. Prentice-Hall, Englewood Cliffs, New Jersey.

Williams, Stephen B. (editor)

1968 *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.* Papers of the Peabody Museum of Archaeology and Ethnology 58.

Wrenn, Tony P. and Elizabeth D. Mulloy

1972 *America's Forgotten Architecture*. Pantheon Books, New York.

Wright, H.E., Jr.

1976 The Dynamic Nature of Holocene Vegetation: A Problem of Paleoclimatic Biogeography, and Stratigraphic Nomenclature. *Quaternary Research* 6:581-596.

Writers' Program

1990 *Georgia: The WPA Guide to its Towns and Countryside*. Compiled by the Writers' Program of the Works Progress Administration. University of South Carolina Press, Columbia.

Yarbrough, Bird and Paul Yarbrough

1986 *Taylors Creek: A Story of the Community and Her People, 1760-1986*. A Press, Greenville.

Zierden, Martha, Elizabeth J. Reitz, and Daniel Weinand

1995 *Initial Archaeological Testing: The Nathaniel Russell House*. Archaeological Contributions 24. The Charleston Museum, Charleston, South Carolina.

APPENDIX 1.
CATALOG OF RECOVERED MATERIALS

Site Number: 9LG94

Spec No.	Location	Number	Description	Class 1
237	T1A/ST1 Surface	9	whiteware, undecorated	X
		1	whiteware, molded	X
		1	whiteware, blue transfer print	X
		1	manganese glass	
		1	milk glass	
		1	window Glass	X
		1	strap iron	
		1	brick fragment	
		1	shell	
238	T1A/ST1 N245E230	1	aqua glass	
		1	nail fragment	
239	T1A/ST1 N245E215	1	brick fragment	
240	T1A/ST1 N230E245	1	nail, wire cut	X
241	T1A/ST1 N230E215	1	nail fragment	
		1	brick fragment	
242	T1A/ST1 N215E245	1	nail, wire cut	X
243	T1A/ST1 N215E230	1	nail, wire cut	X
244	T1A/ST1 N215E200	1	window glass	X
245	T1A/ST1 N200E245	1	clear glass, modern	
246	T1A/ST1 N200E170	2	whiteware, undecorated	X
247	T1A/ST1 N185E275	2	brick fragments	
248	T1A/ST1 N185E245	5	brick fragments	
249	T1A/ST1 N185E200	1	aqua glass, bottle neck	X
250	T1A/ST1 N185E140	1	whiteware, undecorated	X
		1	manganese glass	
251	T1A/ST1 N170E245	2	brick fragments	
252	T1A/ST1 N170E215	1	whiteware, undecorated	X
253	T1A/ST1 N170E170	1	whiteware, undecorated	X
254	T1A/ST1 N170E140	1	whiteware, undecorated	X
255	T1A/ST1 TU1A, level 1	1	white porcelain	X
		3	window glass	X
		1	brick fragment	

Site Number: 9LG9

Spec No.	Location	Number	Description	Class 1
256	T13A/ST1 Surface	3	Whiteware, undecorated	X

Site Number: 9LG95

Spec No.	Location	Number	Description	Class 1
257	T25A/ST11 Surface	1	whiteware, undecorated	X

Site Number: 9LG96

Spec No.	Location	Number	Description	Class 1
258	T38A/ST16 Surface	1	whiteware, undecorated	X
		1	aqua glass	X

Site Number: 9LG97

Spec No.	Location	Number	Description	Class 1
259	T39A/ST2 Surface	2	whiteware, undecorated	X
		1	whiteware, annular	X
		1	brown salt glazed stoneware	X
		5	brick fragments	

Site Number: 9LG28

Spec No.	Location	Number	Description	Class 1
260	T41A/ST24 Surface	10	whiteware, undecorated	X
		2	brown salt glazed stoneware	X
		3	stoneware, bristol exterior albany interior	X
		1	blue glass	X
		1	manganese glass	
		1	aqua glass	
		1	light green glass	
		1	milk glass	
		1	clear glass, whole bottle	X
		1	black plastic bottle top (matches whole bottle)	X
261	T41A/ST24 N260E200	1	grey salt glazed stoneware	X
262	T41A/ST24 N245E215	1	manganese glass	
263	T41A/ST24 N245E200	1	aqua glass	
264	T41A/ST24 N230E215	1	window glass	X
		1	nail fragment	
		2	brick fragments	
265	T41A/ST24 N230E170	1	aqua glass	
266	T41A/ST24 N215E215	1	aqua glass	
267	T41A/ST24 N215E200	3	whiteware, undecorated	X
		1	brick fragment	
268	T41A/ST24 N215E185	1	clear glass	
		2	brick fragments	
269	T41A/ST24 N215E170	1	nail fragment	
		1	brick fragment	
270	T41A/ST24 N215E155	1	whiteware, undecorated	X
		1	stoneware, bristol exterior/ albany interior	X
		2	clear glass (mend)	
		1	melted glass	

Site Number: 9LG98

Spec No.	Location	Number	Description	Class 1
271	T42A/ST5 Surface	1	stoneware, albany slip	X
		1	green glass	
272	T42A/ST5 N190E200	1	window glass	X

Site Number: 9LG99

Spec No.	Location	Number	Description	Class 1
273	T50A/ST3 Surface	2	yellowware	X
		25	whiteware, undecorated	X
		2	tortorseshell	X
		1	stoneware, bristol exterior/albany interior	X
		2	stoneware, bristol exterior w/ cobalt blue	X
		1	coarse red earthenware	X
		1	brown glass	
		2	blue glass	
		3	light green glass	X
		13	aqua glass	
		10	clear glass	
		17	manganese glass	
		5	milk glass, preserve jar lids	X
		2	window glass	X
		3	brick fragments	
274	T50A/ST3 N200E215	1	manganese glass	X
275	T50A/ST3 N200E170	2	brick fragments	
276	T50A/ST3 N185E200	1	brick fragment	
277	T50A/ST3 N185E125	1	clear glass	
		1	aqua glass	
278	T50A/ST3 N170E200	1	manganese glass	
		1	aqua glass	
		1	nail, wire cut	X
279	T50A/ST3 N170E185	1	black glass	
		1	clear glass	
280	T50A/ST3 N170E170	1	window glass	X
281	T50A/ST3 N170E155	1	nail fragment	
282	T50A/ST3 N170E140	2	whiteware, undecorated	X
		7	clear glass	
		1	window glass	X
283	T50A/ST3 N170E125	1	window glass	X
284	T50A/ST3 N155E185	1	whiteware, undecorated	X
		3	clear glass	
		1	green glass	
		4	brick fragments	
285	T50A/ST3 N155E155	3	clear glass	
		3	window glass	X
		1	melted glass	
		1	UID iron fragment	
286	T50A/ST3 N155E110	26	light green glass	
		1	window glass	X
		1	brick fragment	
287	T50A/ST3 N140E200	1	whiteware, undecorated	X
288	T50A/ST3 N140E170	1	whiteware, undecorated	X
		1	brown glass	
288	T50A/ST3 N140R170	3	green glass	
		3	aqua glass	
		10	clear glass	
		1	brick fragment	
289	T50A/ST3 N140E125	1	manganese glass	
290	T50A/ST3 N125E170	1	window glass	X
291	T50A/ST3 N110E200	1	brick fragment	
292	T50A/ST3 TU9A, level 1	1	window glass	X
		1	nail fragment	
293	T50A/ST3 TU9A, level 2	1	aqua glass	

Site Number: 9LG99 (cont.)

Spec No.	Location	Number	Description	Class 1
293 (cont.)		2	manganese glass	
		1	iron rod fragment	
		1	brick fragment	
294	T50A/ST3 TU9A, level 3	2	manganese glass	
		1	nail fragment	

Site Number: 9LG100

Spec No.	Location	Number	Description	Class 1
295	T66A/ST29 N210E250	1	chert flake	
296	T66A/ST29 N200E250	1	chert flake	
297	T66A/ST29 N200E240	1	chert flake	
298	T66A/ST29 N200E220	1	metavolcanic flake	
299	T66A/ST29 N200E200	1	chert biface	X
		2	chert flakes	
300	T66A/ST29 N200E190	1	chert flake	
301	T66A/ST29 TU10A, level 3	2	chert flakes	
302	T66A/ST29 TU10A, level 8	1	chert flake	

Site Number: 9LG101

Spec No.	Location	Number	Description	Class 1
303	T80A/ST7 Surface	3	whiteware, undecorated	X
		1	white porcelain	
		1	brown glass	
		1	aqua glass	
		1	clear glass	
		3	milk glass	
304	T80A/ST7 N200E200	3	whiteware, undecorated	X
		1	aqua glass	
		5	clear glass	
		1	milk glass	
305	T80A/ST7 N200E185	5	whiteware, undecorated	X
		1	brown glass	
		2	clear glass	
		3	nail fragments	
306	T80A/ST7 N185E170	1	button cover	X
		1	brick fragment	
307	T80A/ST7 N185E155	1	whiteware, black strip	X
		3	clear glass	
308	T80A/ST7 N170E185	2	brown glass	
309	T80A/ST7 N170E170	1	clear glass	X
		7	clear glass	
		1	milk glass	
		2	iron fragments	
310	T80A/ST7 N170E155	1	stoneware	
		1	manganese glass	
		2	clear glass	
		5	brick fragments	
311	T80A/ST7 TU11A, level 1	1	window glass	X
312	T80A/ST7 TU11A, level 2	2	wood fragments	
		2	nail fragments	
		2	brick fragments	
313	T80A/ST7 TU11A, level 3	1	brick fragment	

Site Number: 9LG23

Spec No.	Location	Number	Description	Class 1
314	T147A/ST1 Surface	4	whiteware, undecorated	X
		1	whiteware, striped	X
		1	stoneware	X
		1	black glass	
		2	blue glass	
		1	green glass	
		1	light green glass	
		8	aqua glass	
		1	clear glass	
		2	manganese glass	
		4	milk glass	
		2	window glass	X
		2	animal bone	
315	T147A/ST1 N200E230	1	yellowware, annular	X
316	T147A/ST1 N200E215	1	white ware, undecorated	X
		1	aqua glass	
317	T147A/ST1 N200E200	2	aqua glass	
		1	clear glass	
		1	window glass	X
318	T147A/ST1 N170E200	1	chert flake	

Site Number: 9LG102

Spec No.	Location	Number	Description	Class 1
319	T149A/ST23 Surface	4	whiteware, undecorated	X
		1	white porcelain	X
320	T149A/ST23 N200E200	2	clear glass	
321	T149A/ST23 N190E200	1	stoneware	X
322	T149A/ST23 N170E200	2	manganese glass	
323	T149A/ST23 TU13A, level 2	1	clear glass	
		1	nail fragment	
		1	iron fragment	

Site Number: 9LG103

Spec No.	Location	Number	Description	Class 1
324	T150A/ST22 Surface	2	aqua glass	
		3	clear glass	
		6	milk glass	X
		1	preserve jar cap - zinc & milk glass	X
		12	zinc preserve jar cap fragments	X
		1	iron can fragment, seam	X
325	T150A/ST22 N200E200	1	clear glass	
		3	zinc preserve jar cap fragments	
		10	iron can fragments	
326	T150A/ST22 TU14A, level 1	1	aqua glass	
		12	clear glass	
		4	zinc preserve jar cap fragments	X
		11	iron fragments	
327	T150A/ST22 TU14A, level 2	1	aquz glass	
		5	clear glass	
		1	milk glass	
		10	iron can fragments	
328	T150A/ST22 TU14A, level 3	2	clear glass	
		2	milk glass	X
		2	iron can fragments	

Site Number: 9LG104

Spec No.	Location	Number	Description	Class 1
329	T166A/ST13 N200E200	1	chert flake	

Site Number: 9LG105

Spec No.	Location	Number	Description	Class 1
330	T193A/ST1 Surface	1	window glass	X
		1	chert flake	
331	T193A/ST1 N245E230	1	metavolcanic flake	
332	T193A/ST1 N230E230	1	chert flake	
333	T193A/ST1 N215E230	1	chert flake	
334	T193A/ST1 N215E200	1	chert flake	
335	T193A/ST1 N200E200	1	Savannah check stamped	X
336	T193A/ST1 N200E185	1	chert flake	
337	T193A/ST1 N185E145	1	chert flake	
338	T193A/ST1 N185E230	1	chert flake	
339	T193A/ST1 N170E245	1	chert flake	
340	T193A/ST1 N170E230	1	chert flake	
		1	ciltstone flake	
341	T193A/ST1 N170E215	3	chert flakes	
342	T193A/ST1 N170E200	1	small prehistoric sherd	X
343	T193A/ST1 N155E245	1	chert flake	
344	T193A/ST1 N155E230	1	chert flake	
345	T193A/ST1 N125E230	1	chert flake	
346	T193A/ST1 TU18A, level 1	1	chert flake	
347	T193A/ST1 TU18A, level 3	1	metavolcanic flake	
348	T193A/ST1 TU18A, level 4	1	chert flake	

Site Number: 9LG106

Spec No.	Location	Number	Description	Class 1
349	T194A/ST2 Surface	8	whiteware, undecorated	X
		1	white porcelain	X
		1	aqua glass	
		1	light green glass	
		1	manganese glass	
		3	clear glass bottles	X
		4	clear glass	
		2	milk glass	X
		2	zinc preserve jar cap fragments	X
		1	iron plow fragment	X
		1	brick fragment	
350	T194A/ST2 N215E200	1	rubber shoe sole	X
351	T194A/ST2 N200E200	1	whiteware, undecorated	X
352	T194A/ST2 N170E200	2	light green glass	
353	T194A/ST2 TU19A, level 1	2	whiteware, undecorated	X
		4	clear glass	
		1	brass gear	X
		1	brass wire, twisted	
		1	zinc fragment	
		1	brick fragment	
354	T194A/ST2 TU19A, level 2	2	aqua glass	
		3	clear glass	
		3	nail fragments	
		1	barbed wire fragment	
		1	iron fragment	

Site Number: 9LG107

Spec No.	Location	Number	Description	Class 1
355	T198A/ST4 N200E200	1	chert flake	
356	T198A/ST4 N190E200	2	chert flakes	

Site Number: 9LG6

Spec No.	Location	Number	Description	Class 1
357	T211A/ST2 N200E210	1	chert flake	
358	T211A/ST2 N200E200	1	chert flake	

Site Number: 9LG108

Spec No.	Location	Number	Description	Class 1
359	T218A/beginning Surface	1	chert projectile point fragment	X

Site Number: 9LG109

Spec No.	Location	Number	Description	Class 1
360	T290A/ST15 N200E200	1	green glass	
		1	aqua glass	

Site Number: 9LG110

Spec No.	Location	Number	Description	Class 1
361	T292A/ST1 N215E200	1	clear glass	
362	T292A/ST1 N215E185	1	window glass	X
363	T292A/ST1 N200E200	2	clear glass	
		1	manganese glass	
		1	window glass	X
364	T292A/ST1 N185E185	5	roofing tin fragments	
		1	buck fragment	
365	T292A/ST1 N170E200	1	clear glass	
		3	window glass	X
		1	nail fragment	
366	T292A/ST1 TU24A, level 1	1	milk glass	
		5	nail fragments	

Site Number: 9LG111

Spec No.	Location	Number	Description	Class 1
367	T300A/ST15 N200E200	1	clear glass	

Site Number: 9LG112

Spec No.	Location	Number	Description	Class 1
368	T302A/ST6 Surface	1	clear glass bottle	X
		1	clear glass	
		1	milk glass	
369	T302A/ST6 N215E200	1	manganese glass	
370	T302A/ST6 N215E185	1	light green glass	
		8	clear glass	
		2	manganese glass	
		1	milk glass	
		1	window glass	X
		7	nail fragments	
371	T302A/ST6 N200E215	2	clear glass	
		1	window glass	X
		1	brick fragment	
372	T302A/ST6 N200E170	1	whiteware, undecorated	X
		1	stoneware	X
		1	blue glass	
		1	clear glass	
		2	nail fragments	
373	T302A/ST6 N185E200	1	clear glass	
		4	nail fragments	
374	T302A/ST6 N185E185	1	stoneware	X
		1	milk glass	
375	T302A/ST6 N185E170	1	aqua glass	
		1	manganses glass	
		4	nail fragments	
376	T302A/ST6 N178E170	1	stoneware	X
		4	manganese glass	
		2	window glass	X
377	T302A/ST6 N170E200	14	nail fragments	
		1	flat tin fragment	
		1	shotgun shell base	
378	T302A/ST6 N170E185	1	light green glass	
		1	clear glass	
379	T302A/ST6 N155E195	3	nail fragments	
380	T302A/ST6 TU27A, level 1	1	aqua glass	X
		3	clear glass	
		1	brick fragment	
381	T302A/ST6 TU27A, level 3	1	clear glass	
		2	nail fragments	

Site Number: 9LG113

Spec No.	Location	Number	Description	Class 1
382	T365A/ST1 Surface	1	whiteware, undecorated	X

Site Number: 9LG114

Spec No.	Location	Number	Description	Class 1
383	T370A/ST1 Surface	1	yellowware	X
		10	whiteware, undecorated	X
		3	stoneware	X
		2	green glass	
		3	light green glass	
		12	aqua glass	
		5	clear glass	
		3	manganese glass	
		1	window glass	X
		1	oyster shell	
384	T370A/ST1 N230E140	1	nail, wirecut	X
385	T370A/ST1 N200E200	3	whiteware, undecorated	X
386	T370A/ST1 N200E185	1	light green glass	
		1	clear glass	
		2	nail fragments	
387	T370A/ST1 N200E170	2	creamware, undecorated	X
		1	nail, wirecut	X
		1	crown cap	X
388	T370A/ST1 N200E155	1	whiteware, undecorated	X
		1	brown glass	
		3	clear glass	
		1	nail fragment	
389	T370A/ST1 N200E125	1	clear glass	
390	T370A/ST1 N197E137	5	blue glass	
391	T370A/ST1 N185E185	2	aqua glass	
		4	clear glass	

Site Number: 9TT143

Spec No.	Location	Number	Description	Class 1
392	T378A/ST2 Surface	2	yellowware, annular	X
		1	creamware, undecorated	X
		10	whiteware, undecorated	X
		2	stoneware	X
		4	aqua glass	
		2	clear glass	X
		3	clear glass	
		1	manganese glass	X
		3	manganese glass	
		2	mail fragment	
		1	porcelain doll arm fragment	X
		1	horseshoe	X
		1	iron fragment	
		3	brick fragment	
		1	oyster shell	
393	T378A/ST2 N245E200	1	whiteware, undecorated	X
394	T378A/ST2 N230E215	1	window glass	X
395	T378A/ST2 N230E200	1	whiteware, undecorated	X
		1	aqua glass	
		1	clear glass	
		1	manganese glass	
		20	iron can fragments	
		1	brick fragment	
396	T378A/ST2 N215E215	5	clear glass	
		1	nail, wire cut	X
		1	brick fragment	

Site Number: 9TT143(cont.)

Spec No.	Location	Number	Description	Class 1
397(cont.)	T378A/ST2 N215E200	1	whiteware, undecorated	X
		3	clear glass	
		3	milk glass	
		8	brick fragments	
398	T378A/ST2 N215E170	1	manganese glass	
399	T378A/ST2 N215E140	6	oyster shell fragments	
400	T378A/ST2 N200E170	2	clear glass	
401	T378A/ST2 N185E230	1	clear glass	
		1	bolt fragment	
402	T378A/ST2 N185E185	1	whiteware, undecorated	X
403	T378A/ST2 N185E170	1	manganese glass	
404	T378A/ST2 N170E215	5	nail fragment	
405	T378A/ST2 N170E200	1	light green glass	
		1	clear glass	
		2	brick fragments	
406	T378A/ST2 N155E215	3	brown glass	

Site Number: 9LG116

Spec No.	Location	Number	Description	Class 1
407	T402A/ST15 N200E200	1	brick fragment	
408	T402A/ST15 N200E180	1	chert flake	

Site Number: 9LG117

Spec No.	Location	Number	Description	Class 1
409	T407A/ST16 Surface	1	whiteware, undecorated	X
		1	aqua glass	
		1	clear glass	
410	T407A/ST16 N215E200	2	clear glass	
		1	nail, wire cut	
411	T407A/ST16 N200E200	1	whiteware, undecorated	X
		1	brown glass	
		6	aqua glass	
		4	clear glass	
		2	milk glass	
		1	iron can fragment	
		1	zinc fragment	
412	T407A/ST16 N200E185	2	whiteware, undecorated	X
		2	green glass	
		2	light green glass	
		3	aqua glass	
		1	blue glass	
		5	clear glass	
		2	manganese glass	
		1	suspendor button	X
		1	nail, wire cut	X
		1	iron ring	
413	T407A/ST16 N200E170	1	clear glass	
		2	nail fragment	
414	T407A/ST16 N170E185	1	clear glass	
415	T407A/ST16 N155E185	1	clear glass	
416	T407A/ST16 TU32A, level 1	2	aqua glass	
		1	clear glass	

Site Number: 9LG118

Spec No.	Location	Number	Description	Class 1
417	T410A/ST2 N200E220	1	chert flake	
418	T410A/ST2 N200E210	1	chert flake	
419	T410A/ST2 N200E200	1	chert flake	

Site Number: 9LG119

Spec No.	Location	Number	Description	Class 1
420	T410A/ST19 N200E200	1	amber glass	

Site Number: 9TT142

Spec No.	Location	Number	Description	Class 1
421	T426A/ST12 N230E200	1	chert flake	
422	T426A/ST12 N200E200	1	nail, wire cut	X
423	T426A/ST12 N200E185	1	whiteware, undecorated	X
		1	white porcelain, green edge	X
		2	clear glass	
		1	nail fragment	
424	T426A/ST12 N200E170	2	whiteware, undecorated	X
425	T426A/ST12 N170E200	1	Savannah plain	X
426	T426A/ST12 TU35A, level 1	1	clear glass	
427	T426A/ST12 TU35A, level 3	1	nail fragment	
428	T426A/ST12 TU35A, level 5	1	chert flake	

Site Number 9LG120

Spec No.	Location	Number	Description	Class 1
429	T198B/ST2 Surface	16	whiteware, undecorated	X
		1	whiteware, flow blue transfer print	X
		1	white porcelain	X
		2	stoneware	X
		2	aqua glass	
		4	light green glass	
		1	blue glass	
		2	clear glass	
		2	manganese glass	
		1	iron fragment	
430	T198B/ST2 N230E200	2	whiteware, undecorated	X
		1	herty cup fragment	X
		1	brown glass	
		1	iron caster arm	
431	T198B/ST2 N215E215	1	clear glass	
		2	manganese glass	
432	T198B/ST2 N200E200	1	whiteware, undecorated	X
		1	manganese glass	

Site Number 9LG47

Spec No.	Location	Number	Description	Class 1
433	T69B/ST45 Surface	8	whiteware, undecorated	X
		1	whiteware, sponge decorated	X
		1	stoneware	X
		1	black glass	
		1	blue glass	
		2	aqua glass	X
		4	aqua glass	
		1	clear glass	X
		4	clear glass	
		3	manganese glass	
		1	brass fragment	
434	T69B/ST45 N260E215	1	nail fragment	
435	T69B/ST45 N245E215	1	whiteware, undecorated	X
436	T69B/ST45 N230E245	1	light green glass	X
437	T69B/ST45 N230E215	1	nail, wire cut	X
438	T69B/ST45 N230E200	1	clear glass	
439	T69B/ST45 N230E185	2	nail fragments	
440	T69B/ST45 N215E260	1	milk glass	X
		1	clear glass	
		2	nails, wire cut	
		1	iron fragment	
441	T69B/ST45 N215E245	2	clear glass	
		2	nail fragments	
442	T69B/ST45 N215E230	1	whiteware, undecorated	X
		1	aqua glass	
		6	clear glass	
		2	manganese glass	
		1	nail, wire cut	X
		1	nail fragment	
		1	iron strap fragment	
443	T69B/ST45 N215E200	1	manganese glass	
		3	nail fragments	
444	T69B/ST45 N200E245	1	whiteware, undecorated	X
		1	nail fragment	
445	T69B/ST45 N200E200	1	nail, wire cut	X
446	T69B/ST45 N200E170	1	whiteware, undecorated	X

Site Number 9LG121

Spec No.	Location	Number	Description	Class 1
447	T205B/ST3 Surface	1	whiteware, undecorated	X
		1	enameled tin pan	X
		1	glass insulator	X
		1	mortar sample	
448	T205B/ST3 N200E200	1	stoneware	X
449	T205B/ST3 N150E230	1	white porcelain	X
450	T205B/ST3 N150E220	2	whiteware, undecorated	X
		1	nail, wire cut	X
		1	iron fragment	

Site Number 9LG122

Spec No.	Location	Number	Description	Class 1
451	T122B/ST1 N200E200	1	chert flake	

Site Number 9LG123

Spec No.	Location	Number	Description	Class 1
452	T118B/ST4 N210E210	1	chert flake	
453	T118B/ST4 N210E200	1	chert flake	
454	T118B/ST4 N200E210	1	chert flake	
455	T118B/ST4 N200E200	1	chert flake	

Site Number 9LG124

Spec No.	Location	Number	Description	Class 1
456	T113B/ST25 N200E200	1	chert flake	

Site Number 9LG125

Spec No.	Location	Number	Description	Class 1
457	T88B/ST1 N200E200	2	whiteware, undecorated	X

Site Number 9LG126

Spec No.	Location	Number	Description	Class 1
458	T65B/ST15 N200E200	1	stoneware	X

Site Number 9LG127

Spec No.	Location	Number	Description	Class 1
459	T62B/ST15 N200E200	1	pearlware, flow blue transfer print	X

Site Number 9LG128

Spec No.	Location	Number	Description	Class 1
460	T54B/ST16 N200E200	1	pearlware, undecorated	X

Site Number 9LG129

Spec No.	Location	Number	Description	Class 1
461	T49B/ST18 N200E200	1	chert flake	

Site Number 9LG130

Spec No.	Location	Number	Description	Class 1
462	Surface	2	whiteware, undecorated	X
		1	stoneware	X
		1	milk glass	
		2	brick fragment	